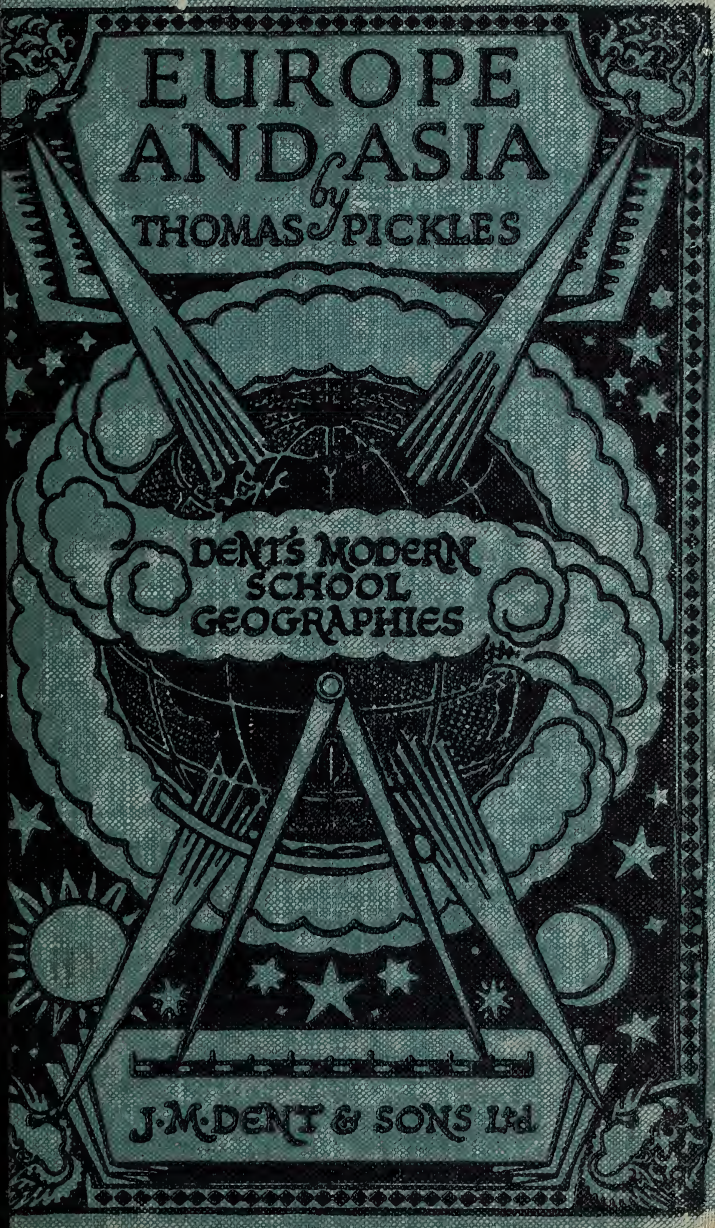
EUROPE AND ASIA

by THOMAS PICKLES



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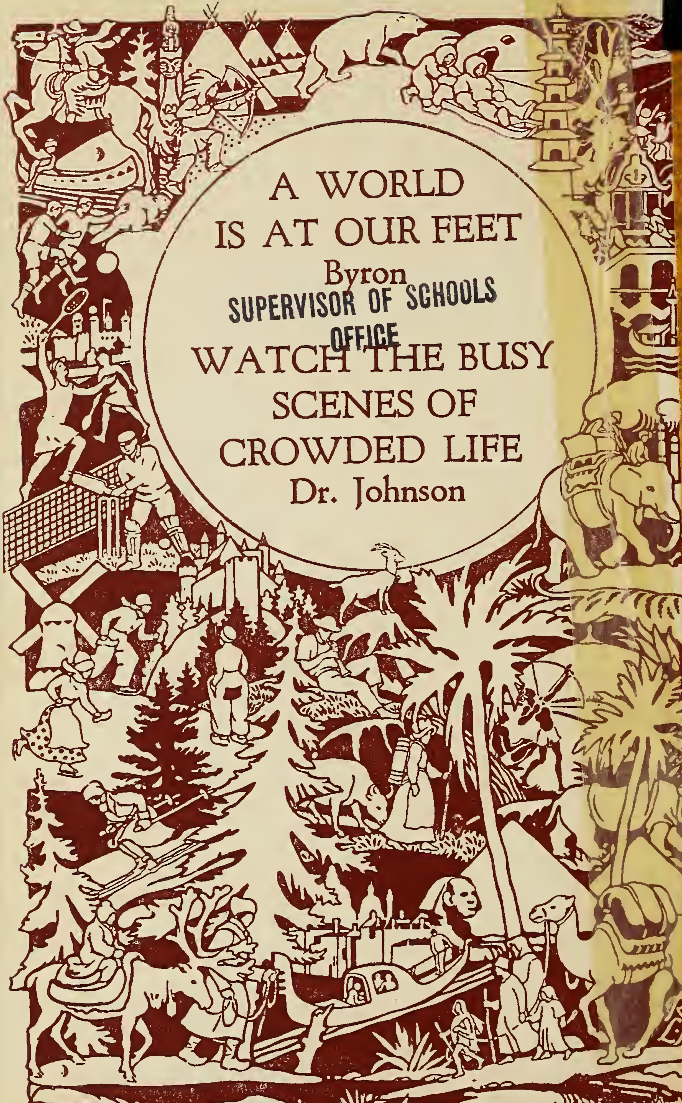

A WORLD
IS AT OUR FEET
Byron

SUPERVISOR OF SCHOOLS
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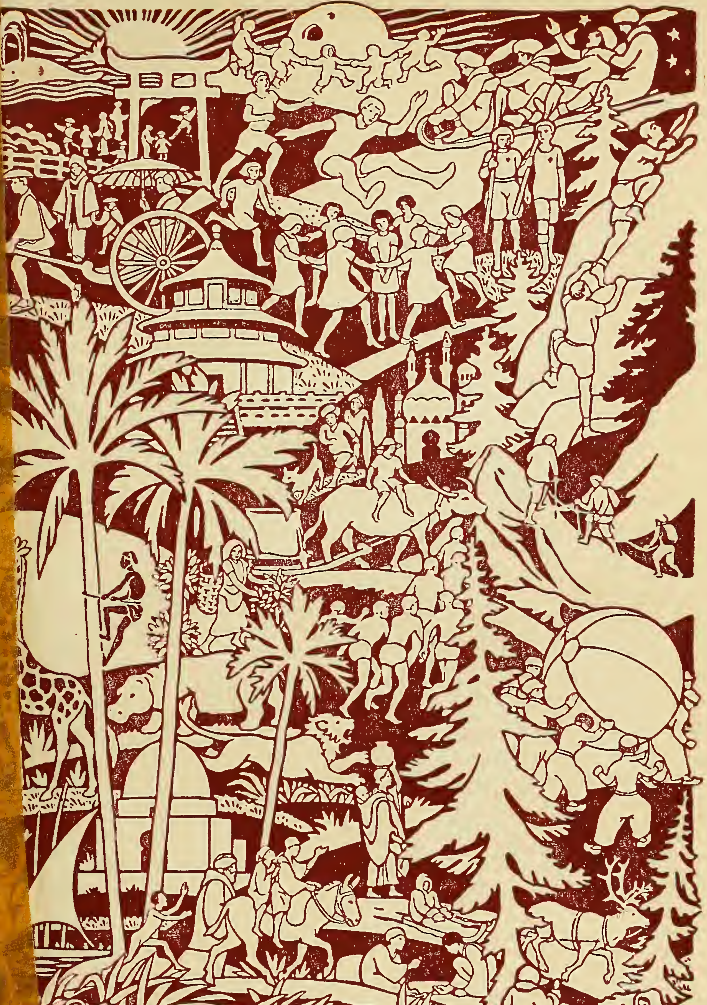
WATCH THE BUSY
SCENES OF
CROWDED LIFE
Dr. Johnson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MOUNTAIN PASTURE IN THE ALPS, WITH THE MATTERHORN IN THE BACKGROUND

DENT'S MODERN SCHOOL GEOGRAPHIES

EUROPE & ASIA

BY

THOMAS PICKLES, B.Sc.

Senior Geography Master, Holgate Grammar School, Barnsley

WITH
132 ILLUSTRATIONS

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PREFACE

This series of text-books is intended for pupils in Senior Schools, Central Schools, and the Junior Forms of Secondary Schools.

The books are most suitable for use in the following order :

1st year—Africa and Australasia.
2nd year—North and South America.
3rd year—Europe and Asia.
4th year—Britain and the Modern World.

As, however, each volume is self-contained, the order may be varied to suit the capacity of the pupils or the needs of the school course.

The regional grouping here adopted has the following advantages :

(1) The continents are dealt with in an ascending order of complexity, beginning with the relatively simple land forms and simple social organisations of Africa, and finishing with the highly complex region of western Europe.

(2) A large part of each year's course is devoted to the study of a major portion of the British Empire.

(3) The regional geography of the continents is covered in the first three volumes, the fourth providing a review of the world, with special reference to the relationships of Britain to the Empire and to the world as a whole.

In each book some aspects of the Geography of the British Isles are dealt with, so that a knowledge of our own islands is built up as the course proceeds. The fourth volume is planned primarily to follow the regional studies, but care has been taken to present the subject-matter in a form easily grasped by young pupils, so as to make it suitable for the final year in those schools which have only a three year course.

Throughout the course emphasis is laid on the home life and daily work of the people. No attempt has been made to follow the so-called " scientific " sequence—" Position, Relief, Climate, Products, Occupations "—which too often succeeds only in killing the natural interest of the pupil. The aim has been rather to build up a conception of the varied activities of mankind in widely differing environments. It is confidently expected that the large number of illustrations which are included in each volume will very materially assist in this aim. For permission to use these, the author is deeply indebted to the various Consulates, Legations, Government Departments, Railway and Steamship Companies, etc., to whom acknowledgment is made at the foot of the reproductions.

T. Pickles.

Barnsley,
June 1932.

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(*Photograph by Donald McLeish*)

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EUROPE AND ASIA

INTRODUCTORY SURVEY

Suppose a visitor from another planet were approaching the earth. As he came near enough to distinguish oceans, plains and mountains, he would see the great land mass of Europe and Asia, covering about a third of the earth's surface, and divided into three parts ; a broad triangular plain in the north, vast chains of mountains in the middle, and great plateaus in the south. Between the plains and the mountainous belt he would see a line of inland seas and lakes—the Black Sea, the Caspian Sea, the Sea of Aral, etc. ; and between the mountains and the plateaus he would see a great hollow, different parts of which we call the Mediterranean Sea, Mesopotamia, the Persian Gulf, and the Indo-Gangetic Plain. All these features are shown in fig. 1, which the pupils should study and compare with the atlas maps.

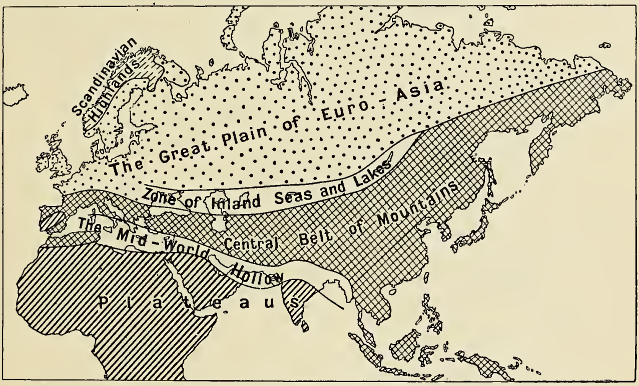

Scandinavian Highlands
The Great Plain of Euro-Asia
Zone of Inland Seas and Lakes
Central Belt of Mountains
The Mid-World Hollow
Plateaus

Fig. 1.—The structural divisions of the old world

Now imagine our strange visitor to be gifted with superhuman powers and vision, and to remain suspended above the earth so that he can see the predominant colours of the landscape. As he surveyed the land mass of Euro-Asia during the course of the year, he would see definite belts of colour which correspond to the great Natural Divisions (see figs. 2, 3, and 4).

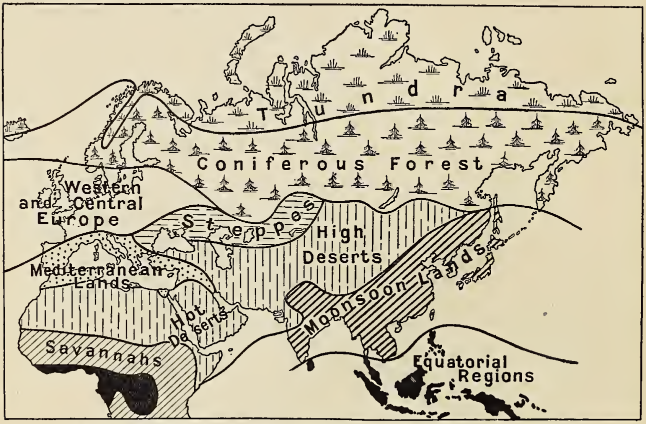


FIG. 2.—THE NATURAL REGIONS OF THE OLD WORLD

(1) **The Tundra Region.**—For nine months of the year this would be white with snow and ice; then for a brief period in summer the whiteness would be replaced by the sombre tones of the bare rock, relieved only by occasional green patches of vegetation and by the gleaming surface of rivers and lakes.

(2) **The Coniferous Forest.**—Seen from above, this would be dark green in summer, but in winter, when the snow lies on the ground and on the trees for several months, it would be an unbroken expanse of white (see fig. 53, p. 98).

(3) **The Steppes and Deserts.**—Here the predominant colours throughout the year would be yellow and brown,

and our observer would probably be unable to distinguish between (*a*) the *poor grasslands* such as the Kirghiz Steppes, (*b*) the *hot* deserts such as Arabia, and (*c*) the *high deserts* such as the Gobi.

(4) **The Monsoon Lands,** of south-eastern Asia, would be green with trees and cultivated crops in summer, when the weather is hot and wet ; in winter too, though the weather is dry, there would be many large green patches where the land is irrigated and produces crops all the year round.

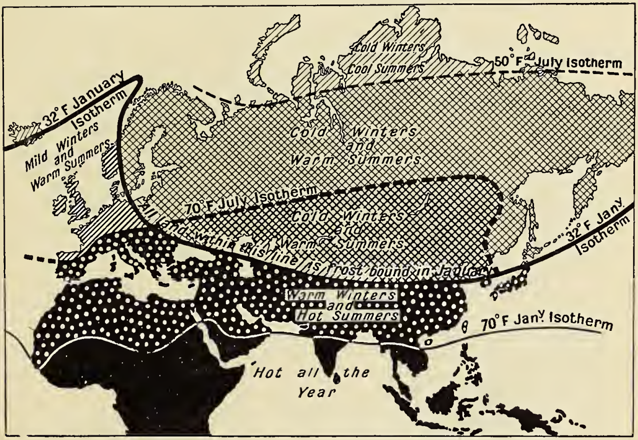

32° F January Isotherm
Mild Winters and Warm Summers
Cold Winters Cool Summers
50° F July Isotherm
Cold Winters and Warm Summers
70° F July Isotherm
Cold Winters and Warm Summers
All land within this line is frost bound in January
32° F Jany Isotherm
Warm Winters and Hot Summers
70° F Jany Isotherm
Hot all the Year

FIG. 3.—SUMMER AND WINTER TEMPERATURES

(5) **The Equatorial regions,** which are hot and wet at all seasons, would appear green throughout the year—dark green where the forests still remain, and lighter tones where the land has been cleared for cultivation.

In Europe the observer would notice three zones of colour :

(6) **North-western Europe,** which has no season that is either very dry, very cold, or very hot, would be mostly green throughout the year.

(7) **Central and Eastern Europe** would be green in

summer and white in winter, when the land is snowbound for one to six months.

(8) **The Mediterranean Region,** which has warm, moist winters and hot, dry summers, would be mainly green in winter, but a mixture of green, grey and brown in summer.

Now suppose our visitor to be gifted with even more wonderful powers of vision so that he could see every railway and road, every motor car and steamship, every house and factory, and even every person. He would see two corners of Euro-Asia—*western Europe* and the *Monsoon lands* of south-western Asia—where people live crowded together as nowhere else on earth (see fig. 5). But he would also notice great differences between these two areas. In our own region he would see a close network of roads and railways, many smoky cities and busy ports, and millions of people disappearing for the working hours of each day into factories, mines, warehouses and offices.

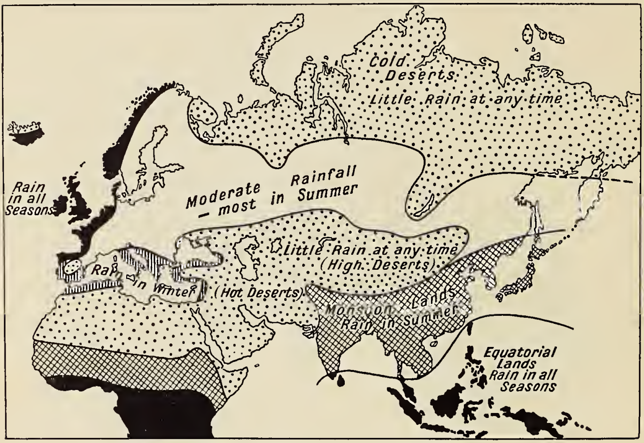

Cold Deserts
Little Rain at any time
Rain in all Seasons
Moderate Rainfall — most in Summer
Little Rain at any time (High Deserts)
Rain in Winter
(Hot Deserts)
Monsoon Lands Rain in Summer
Equatorial Lands Rain in all Seasons

FIG. 4.—SEASONAL RAINFALL

In the monsoon lands, on the other hand, he would see relatively few roads and railways and factories, and nearly all the people would be seen working in the fields from dawn to dark.

Over the rest of Euro-Asia he would see vast empty lands, with few roads and railways, widely separated villages and towns, and only occasional patches of cultivated land. He would, no doubt, be interested to watch a train crawling snake-like across the continent by the route we call the Trans-Siberian Railway ; or to follow the trail of a caravan winding slowly across the deserts of central Asia ; but his gaze would soon return to the crowded lands of western Europe and south-eastern Asia. " There," he would say, " are the lands in which I must spend most of my time if I would learn about the dwellers on the planet Earth."

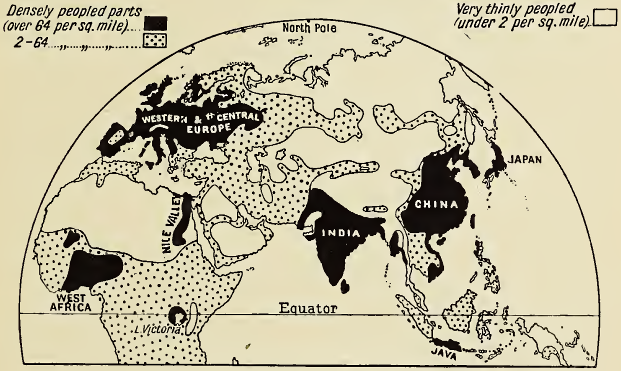


FIG. 5.—DENSITY OF POPULATION

We also, who wish to learn about the life and work of the people in Euro-Asia, must devote most of our time to these same densely peopled districts. There are, of course, many interesting things to be learnt about the thinly peopled parts, but south-eastern Asia and western Europe are of such great importance that the greater part of this book is devoted to those regions.

CHAPTER I

INDIA

INDIA is too large and too varied to be called a country; it is too small and too obviously a part of Asia to be a continent; so we call it a "sub-continent." Within it we may see as many differences as in any continent. In the north are the mighty Himalayas, the "Abode of Snow"; in the south it is always hot, and "winter" has no meaning. In the north-west is a desert as big as Britain; in the north-east is the fertile Ganges Plain where a man can live on the produce of an acre. The 320 million people of India belong to many different races, and speak many different languages. The people of the north differ as much from those of the south as Eskimos do from Italians.

THE PHYSICAL DIVISIONS

Varied as is this sub-continent, it is easy to distinguish on a relief map three well-marked physical divisions, viz.:

(1) **The "boundary wall" of mountains,** including the *Himalayas* in the north, the *Sulaiman* and *Indo-Kush* in the north-west, and the *Arakan Yoma* in the north-east.

(2) **The Plain of Indostan**—watered by the great rivers Indus and Ganges. Once this plain was a great arm of the

sea ; but rivers brought down so much sediment from the mountain wall that they filled up the sea and formed a

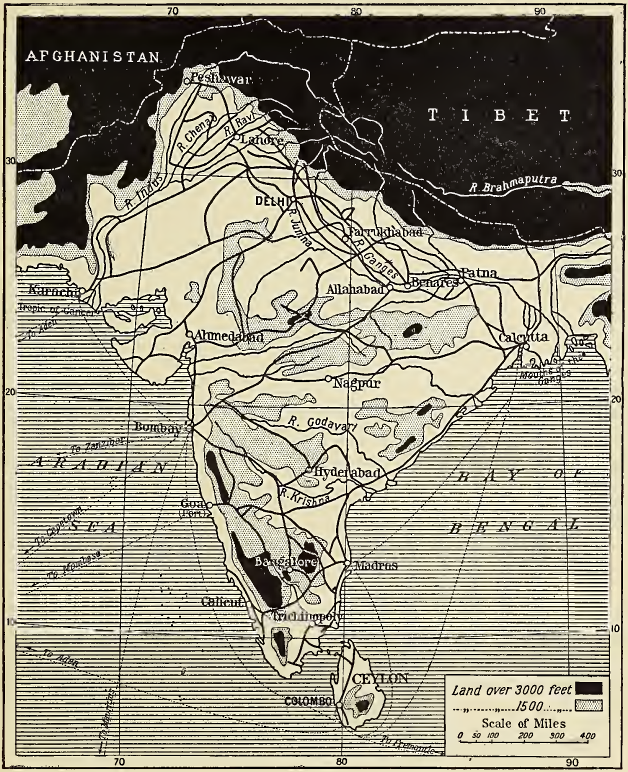


FIG. 6.—INDIA—RELIEF, RAILWAYS AND TOWNS

plain with soil so deep that one may bore a thousand feet down without striking a stone.

(3) **The Deccan,** a great block of land bounded by the *Western Ghats* and the *Eastern Ghats.* Geologists tell us that this was once joined to Arabia, Africa and Australia. It used to be thought that the parts between these lands had sunk below the oceans ; nowadays we are asked to believe (with good reason) an even stranger thing : that once the different parts were all close together, but have gradually drifted away from each other to the positions they now occupy !

THE CLIMATE OF INDIA (See fig. 7)

If one were allowed only a single word with which to describe India that word must be *monsoon.* We should mean, not the dry north-east monsoon of winter but the wet south-west monsoon of summer. If this monsoon were to cease altogether most of the people would die of starvation ; even if the monsoon rains are delayed only a week or two, or the rainfall is not as heavy as usual, great suffering and loss follow. On the other hand, if the rain is excessive, floods ruin the crops and destroy the homes of the people.

We have already seen that in the monsoon countries there are two chief seasons—wet and dry.

In India, however, there are really three seasons, viz. :

(1) **The "cold weather"** during January and February. Even then the weather is never really cold except on the high land, and the days are about as warm as in our own summer.

(2) **The "hot weather"** from March to the middle of June. As the skies are free from clouds, and the sun practically overhead at noon, the temperature rises very rapidly, and in most districts reaches over 100° F. in the shade.

(3) **The rainy season,** following the "burst" of the monsoon in mid-June. The temperature is not so high as in May, but the weather is oppressive and unhealthy. Practically all Europeans in India go up to hill-stations such as Simla and Darjeeling in the Himalayas.

Though these seasons are experienced over the greater part of India, there are two districts where conditions are very different. (*a*) In south-eastern India and Ceylon there is hot, wet weather all the year, for even the north-east monsoon brings rain to this district, since it blows over the Bay of Bengal. (*b*) In north-western India there is little rain even in summer, as the winds are then blowing from the north, and are, therefore, dry winds.

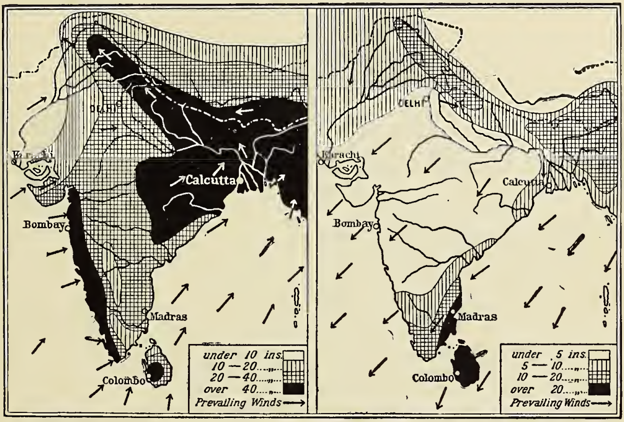


FIG. 7(*a*).—SUMMER WINDS AND RAINFALL

FIG. 7(*b*).—WINTER WINDS AND RAINFALL

THE FARMERS OF INDIA

Nine out of ten people in India live in villages, and at least seven out of ten get their living by farming. The villages in which the farmers live consist of single-roomed huts of mud or bamboo, crowded close together near a well or a pond. The " furniture " consists merely of mats, and vessels of earthenware or brass. There is no stove, no chimney, and generally no window ; when cooking must be done inside, the smoke fills the hut and can only find its way out through the door. Dried cow dung is used both as floor covering and as fuel.

Most of the farms of India are quite small, though the size depends a good deal on the type of land and the crops grown. In the rice-growing districts, for example, two or three acres have to suffice for a family, but where wheat is the chief crop the farms are four times as large.

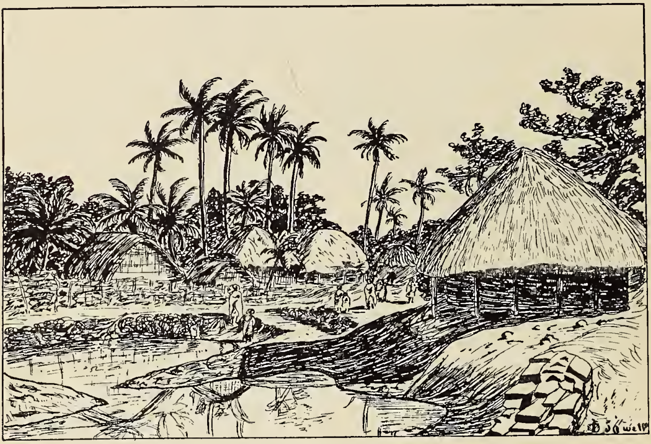
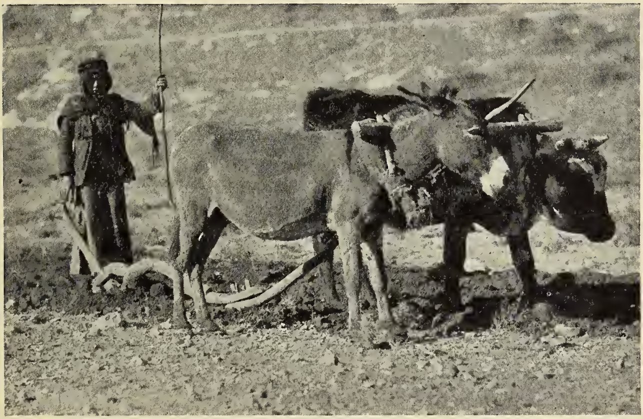


FIG. 8.—A VILLAGE IN BENGAL

The whole of the farm-land around a village is divided up into plots which are often no bigger than a class-room floor. Of course a man has to have many such plots in order to make a living, but unfortunately these are usually so widely scattered that he often has to walk a mile or more from one to the other. This state of affairs has arisen because when a man dies his land must be divided equally among his sons, and as each requires a bit of each kind of land, every field has to be subdivided.

The Indian farmer is desperately poor, even though he lives very simply. In a good year he will grow practically all the food for his family and his cattle. If, in addition, he can earn three or four pounds by selling his surplus crops, or by working for someone else, he will be reckoned comfortably off. Hardly ever is he able to save money ; so when droughts or floods spoil his crops he has to borrow from the money-lender, who charges him exorbitant rates of interest—" usually from 25 to 300 per cent." Once in debt, the peasant can hardly ever clear himself, and it is said that nearly three-quarters of the people are harassed by debts.



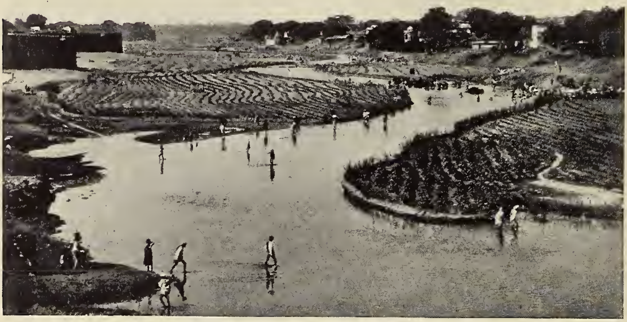
(*C. P. R.*)

FIG. 9.—FARMER PLOUGHING IN INDIA

IRRIGATION

Since the greater part of India has rain only in summer, it is necessary to irrigate the land during the warm, dry winter. The following methods are in use in different parts of the country :

(1) **Canals.**—Long ago the Hindus dug canals to carry the water from the rivers to the thirsty land. But in the dry season, when the rivers are low, such canals are dry, and so the land has no water just when it is most needed. Since the British went to India they have built many great reservoirs, which store the flood waters and enable the land to be watered all the year round. Such "perennial" canals are of great importance in the *Punjab*, or "land of Five Rivers," in north-western India. In the province of *Sind*, around the lower Indus, a great reservoir is now being



(*E. N. A.*)

FIG. 10.—A "TANK" ON THE DECCAN

(Note the shallowness of the water)

constructed at *Sukkur*. From it, 3,700 miles of canal will supply water to an area of 8,000 square miles of land which is now practically desert.

(2) **Wells** are the chief means of irrigation in the upper part of the Ganges Basin. The water is usually raised by a simple rope-and-pulley arrangement, operated by a pair of oxen, which spend their working hours walking to and from the well, thus lowering and raising a great leathern bucket. Nearly 20,000 square miles of land are irrigated by wells in India.

(3) **Tanks** (see fig. 10) are small reservoirs constructed by the natives to store the surplus rain water from the summer monsoon. Very few of them hold enough water to irrigate the land throughout the dry season and sometimes the crops fail for lack of water.

FAMINE IN INDIA

When the monsoon is delayed, or fails to bring its usual heavy rain, famine results. Formerly there was little hope for the people of a famine-stricken area, for though there might be food in plenty in some other part of India there was no way of getting it to the famine area. The famine of 1876–78, for example, cost over five million lives. Though irrigation has prevented the danger of famine in many parts, there are still vast regions where famines occur when the monsoon fails. But the people do not now die in thousands as formerly, because railways and roads enable food to be brought from other districts, and the Government has organised a great famine relief system. In spite of this, famines still create great loss and suffering in India. In the famine of 1918, for instance, Bombay Presidency lost over a million cattle, and the total loss due to failure of crops in the country was 200 crores of rupees (£150,000,000).

THE CULTIVATED CROPS (See fig. 11)

Rice is the chief food crop of India, and occupies more than a third of the cultivated area. It is grown chiefly on the wet lowlands such as the Ganges Basin, and the coastal plains on each side of the Deccan. Most of the rice grown is eaten in the country, so there is not a very great surplus for export.

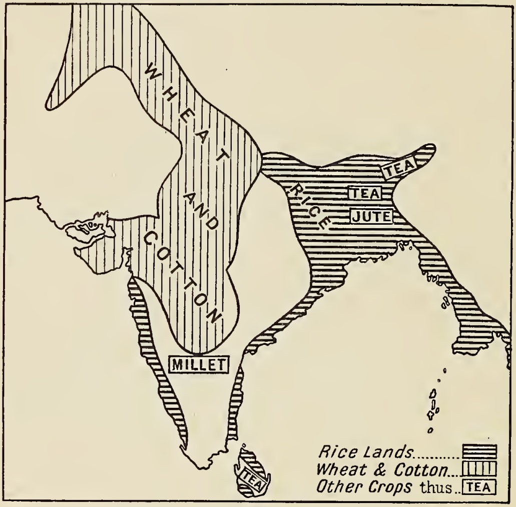


Fig. 11.—INDIA—CHIEF CROPS

Wheat is the next most important crop, occupying one-tenth of the cultivated land. In the Punjab, which is the chief wheat producing region, the wheat is sown in winter, when there is a small amount of rain, and reaped before the " hot weather " sets in. Formerly large quantities of wheat were sent out from Karachi, but the people have now begun to eat wheat instead of other grain, so that there is not usually much for export.

Millet is the chief food of the people in those districts where there is not sufficient rain for rice or wheat.

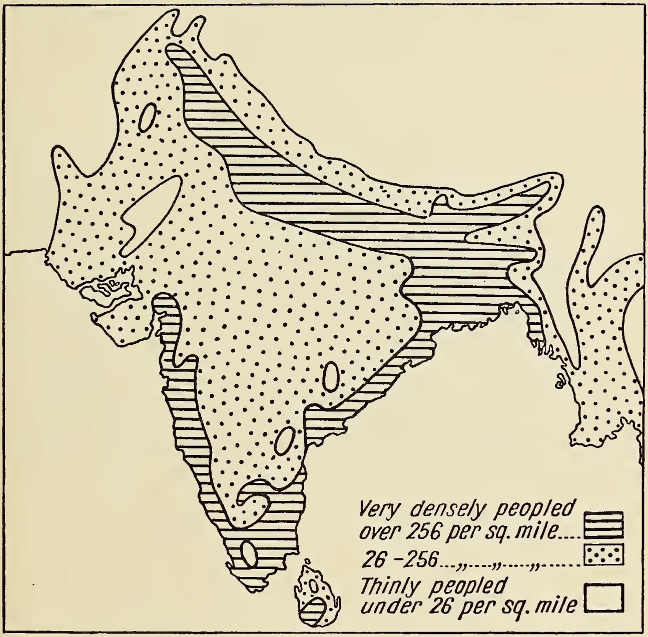


Fig. 12.—INDIA—DENSITY OF POPULATION (COMPARE WITH FIG. 11)

Oil-seeds, such as sesamum, ground nuts and linseed, are widely grown, some of them being crushed in crude native mills to provide oil for cooking and lighting, others being exported.

Cotton is grown chiefly in Bombay Presidency and in the Punjab. In the former district is the famous "*black cotton soil*," which is very deep and fertile and holds water well; in the latter district the cotton is grown on land irrigated by "perennial" canals. Most of the Indian cotton is of "short staple" and poor quality, but the Government is gradually persuading the peasants to grow better varieties.

Jute.—Nearly all the world's jute comes from Bengal, around the delta of the Ganges. It is obtained from the inner bark of the jute plant, which grows to a height of 10 to 20 feet. The fibre is obtained by "retting" the stems in water, as is done with flax.

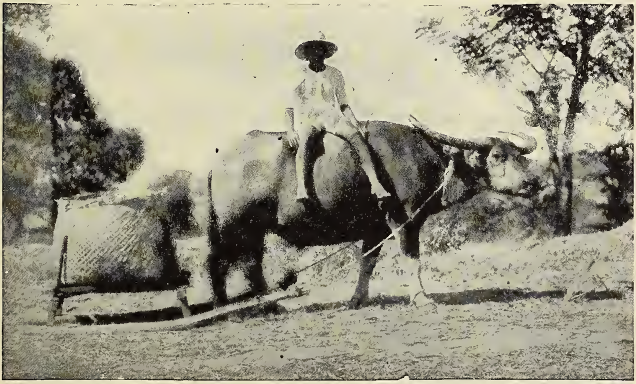
Tea.—India, with Ceylon, produces nearly half of the world's tea. In northern India the tea plant is grown chiefly in the valley of the Brahmaputra, on large estates which are generally British owned. In Ceylon the tea is grown on hill slopes which are often so steep that "a shoe-shod white man would probably slip into a fall of hundreds of feet."

Opium is the juice obtained from the seed-box of the opium poppy. It was formerly widely grown in the Ganges basin, but the Government of India, realising the great harm done by opium smoking, has prohibited its cultivation in most districts and "no opium will be exported for purposes other than medical or scientific after December 31, 1935."

Other crops include **coconuts** and **rubber,** which are produced chiefly in Ceylon; **coffee** and **spices,** which are grown in southern India; **tobacco** and **sugar-cane,** which are cultivated on the wetter lands throughout India.

MANUFACTURING IN INDIA

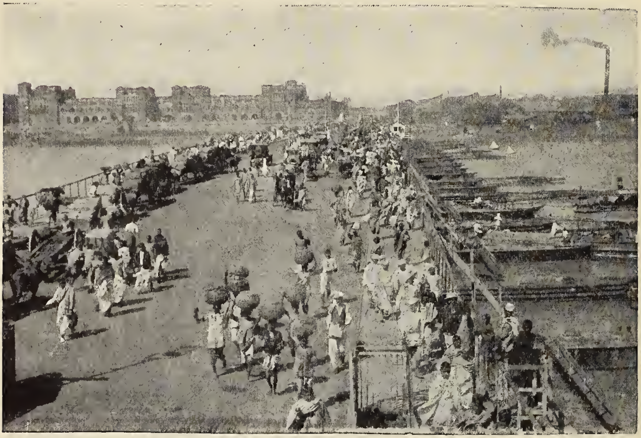
Native Handicrafts.—Every Indian village is practically self-supporting, and produces nearly everything that its inhabitants require. The carpenter makes the ploughs, ox-yokes and bullock-carts ; the blacksmith fashions the plough-shares, sickles and knives ; the weaver manufactures cotton cloth on a primitive loom operated by hands and feet ; the potter, with his simple wheel, moulds the earthenware vessels which represent nearly all the "furniture" to be found in the native huts. Often these native craftsmen are paid very little money for their labour, but receive instead foodstuffs from the peasants for whom they work. There are, however, many native craftsmen, such as goldsmiths, weavers of carpets and fine cloths, and carvers of wood and ivory, whose produce is bought by the merchants and sold by them in the bazaars which are an interesting feature of all Indian towns.



(*C. P. R.*)

FIG. 13.—WATER BUFFALO DRAWING A SLEDGE

The Factory System of India.—India possesses many of the things which are necessary for the development of manufacturing on a large scale. She has a rich coalfield at Raniganj, 100 miles north-west of Calcutta, and good iron ore is mined in the same district ; she produces large quantities of raw material, such as the jute of the Ganges delta and the cotton of the Bombay Presidency and the Punjab ; and she has a vast population, many of whom find it so difficult to get a living on the land that they are eager to take up work in factories.



(*C. P. R.*)

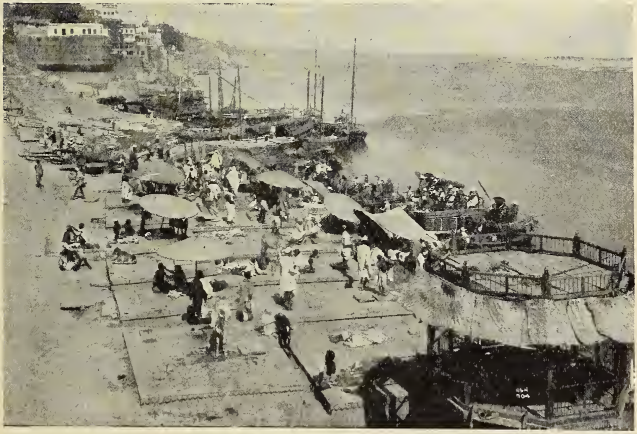
FIG. 14.—THE HOWRAH BRIDGE, CALCUTTA

The conditions of life of the factory workers are very bad. They work ten or more hours a day for very low wages and most of them live in one-roomed tenements without adequate ventilation or sanitary arrangements. They are so poor that they can afford only a small amount of the cheapest kind of food ; and the long hours of work, lack of good food, and the overcrowding of the slums in which they live render them very susceptible to disease.

Fortunately, most of the factory workers live in the towns part of the year only ; during the season of planting or harvest a large proportion of them return to their little plots of land, which they leave at other times to the care of the women and children.

THE CITIES OF INDIA

Of the 30 million Indians who live in towns, nearly three-quarters are to be found in small market towns, where the only manufacturing industries are such as are carried on in small workshops. Most of the large cities are seaports whose prosperity depends on the foreign trade which has developed under British rule.



(*C. P. R.*)

FIG. 15.—BATHERS ON THE BANKS OF THE GANGES, AT BENARES

Calcutta, situated at the head of the ocean-navigation of the Hugli branch of the Ganges, is the largest port of India, and the second city in the British Empire. It manufactures sacking from the locally grown jute, and iron and steel goods from the iron ore mined near Raniganj. It exports jute, sacks, coal, tea and rice.

Bombay, situated on an island which has been joined to the mainland by a causeway, is the chief outlet for the Deccan and central India. Its prosperity dates from the opening of the Suez Canal, which makes it 1,700 miles nearer London than is Calcutta. It is the chief centre for the manufacture of the low-grade cotton goods which are bought by the peasants, and it also exports much raw cotton.

FIG. 16.—CINGALESE HUT NEAR COLOMBO

Madras has the only good harbour on the east coast. It exports rice, teak and cotton.

Karachi, situated a little to the west of the Indus delta, is the outlet for the cotton grown in the Punjab.

Delhi, the ancient and modern capital of India, is situated on the river Jumna. At this point routes converge from the Ganges basin, from the Punjab and from the Deccan, thus making it the most convenient centre from which to rule the whole of India.

Colombo is a port of call and a coaling station for all ships plying in the Indian Ocean. It exports tea, rubber and spices, which are produced on the island.

BURMA

Burma is at present part of the Indian Empire. But the country is shut off from India by almost impassable mountain ranges, and the people are very different from the Hindus, and are really a separate nation. It has therefore been decided that Burma ought to be separated from India, though it will, of course, remain part of the British Empire.

Physically, the country consists of parallel ranges of mountains, running from north to south, with deep valleys between them. The chief of these valleys is that of the *Irrawadi*, which rises near the Chinese boundary and flows to the sea at the great port of Rangoon.

Burma, like India, has a monsoon type of climate, with hot, wet summers, and warm, dry winters. Consequently rice is the chief food crop, and is grown all over the lowlands, except in the middle portion of the Irrawadi basin, which is so much in the rain shadow that rice cannot easily be grown.

The population of the rice lands of Burma is not so dense as in the Ganges basin, and so a much greater amount of rice is available for export. Burma is, in fact, the chief rice-exporting country in the world. **Rangoon,** the capital, is also the chief port. In addition to rice it exports rubber, teak and oil.

EXERCISES

1. Make a collection of labels from articles which we import from India.

2. Make a collection of newspaper cuttings concerning current events in India.

3. Draw a map to show how you would travel to India : (*a*) wholly by sea ; (*b*) partly by rail and partly by sea ; (*c*) by air.

4. Draw a map to show the position of Delhi ; on it draw arrows to represent the routes mentioned on p. 20.

5. Draw diagrams on squared paper to show the following :

Imports of British India.

Cotton Goods.	Iron and Steel.	Machinery.	Sugar.	Silk.	Other Articles.	—
30	8	8	8	4	42	Percentage of total imports

Exports from British India.

Cotton and Cotton Goods.	Jute and Jute Goods.	Food Grains.	Seeds.	Tea.	Other Articles.	—
28	20	15	9	8	20	Percentage of total exports

6. Draw three maps showing (*a*) the wettest parts of India in summer ; (*b*) the rice-growing districts ; (*c*) the most densely peopled districts. Explain the similarity of the three maps.

CHAPTER II

INDO-CHINA, MALAYA AND THE EAST INDIES

Indo-China includes the independent kingdom of Siam and the protectorates of French Indo-China. **Malaya** consists of (*a*) certain " *Unfederated* " *Native States*, which are ruled by their own princes under British guidance ; (*b*) certain " *Federated* " *States*, which are under British protection ; (*c*) *The Straits Settlements*, which are a British Crown Colony. **The East Indies** are composed of islands which are under Dutch rule, with the exception of the *Philippines* (American), north-eastern *Borneo* (British), and *Timor* (mainly Portuguese).

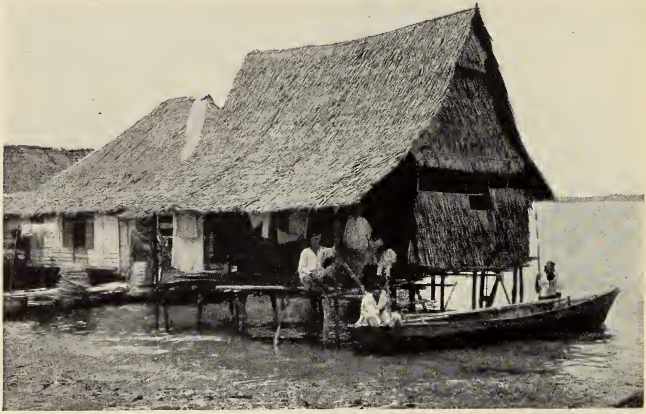
THE LIFE AND WORK OF THE PEOPLE

Three types of people and three methods of earning a living may be noted among the native peoples of these regions :

(1) **The Pigmies,** who live in the mountainous and forested interiors. They are descendants of the original inhabitants who have been driven out of the better lands by stronger tribes. They live by hunting, fishing, and collecting the edible roots and fruits of the forest. They seldom stay in one place for any length of time, but each tribe keeps to its own part of the forest, and each family has the right to the fruit of particular trees. The men spend most of their time hunting, some tribes using blowpipes and poisoned darts, others bows and arrows. The chief work of the women is the collecting of vegetable foods from the

forest, and in this they are sometimes assisted by the men. Their houses consist merely of a sloping screen of leaves, fastened to a framework of sticks.

Though the pigmies have such a difficult task to earn a living in the forest, they seem unable to adopt any other mode of life. Some of them, it is true, have begun to make small plantations, others earn a little rice by working for settled tribes, and many split rattan canes, which they barter for rice or cloth. But the call of the forest is irresistible and there seems little likelihood that the pigmy will ever abandon his nomadic mode of life. " He does not seek earthly comfort ; rather, a thousand times rather, will he lead his frugal forest life in undisturbed peace of heart than exchange it for the cares and disturbing possessions of civilisation."[1]



(*C. P. R.*)

FIG. 17.—MALAY HUTS AT SINGAPORE

(2) **Native Cultivators,** who earn a living on their own

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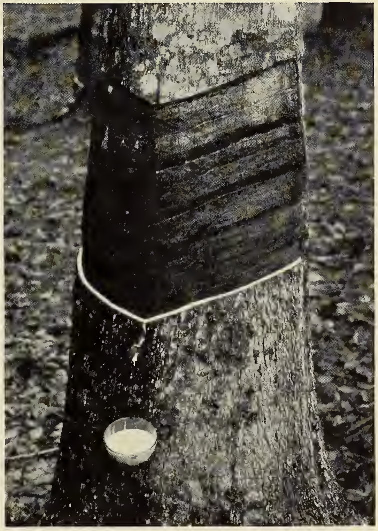
[1] P. Schebesta, *The Forest Dwarfs of Malaya.*

farms. In the less fertile parts fresh plantations have to be made every few years by cutting down trees and burning the undergrowth. In the more fertile districts the land is divided into small farms which are carefully cultivated by generation after generation.

The chief building materials of the natives are: bamboo, which forms the walls and floors; raffia, which is used to tie the bamboo together; and palm leaves, which are used for thatching. In many districts the huts are built for safety on piles driven into the shallow waters near the shore of the sea or a lake; and even in inland districts houses are often built on platforms set high up amid the trees. The chief food crops of the natives are rice, sago, tapioca, sweet potatoes, beans and vegetables. In addition to these many natives produce rubber, copra and spices for sale to the white merchants.



(*C. P. R.*)

FIG. 18.—A TAPPED RUBBER TREE

(3) **Workers on "White-owned" properties.**

(*a*) *Farming.*—There are two ways in which we may make tropical lands produce valuable crops. One is to show the natives how to use their own land to better advantage; and the other is to allow white men to buy the land and turn it into plantations, the labour being supplied by natives who work for wages. The Dutch adopt the former method where possible, and in Java white men are not allowed to buy land of which the natives can make good use. The mountainous lands, of which the natives can make little use, are, however, let or sold to Europeans, and it is on plantations in such areas that most of the tea, coffee, cocoa, rubber and quinine are produced.

(*C. P. R.*)

FIG. 19.—COCONUTS GROWING

In Malaya the chief " plantation crops " are rubber and coconuts, both of which are produced mainly on white-owned plantations.

(*b*) *Mining.*—Malaya is one of the world's chief sources of *tin*. The ore is found mixed with gravel in the river valleys. The mixture of gravel and ore is carried to sheds where it is washed by a swift current of water which carries away the light gravel and leaves the heavy tin ore.

Petroleum is obtained in Java, and *coal* is mined in the island of Labuan.

THE GREAT SEAPORTS

Singapore is situated on a small island of that name at the extreme southern end of the Malay Peninsula. It is one of the world's greatest trading centres, being at the junction of the sea routes between Europe and the Far East and between India and Australia. It has large exports of rubber, tin and spices from the plantation lands around, and, like Colombo, is a great coaling station.

Batavia is the capital and chief port of Java, as **Manila** is of the Philippines. The latter town gave its name to Manila hemp, a fibre produced from the leaves of a plant akin to the banana tree, and used for making the best quality ropes.

EXERCISES

1. " Singapore is the key to the East." Draw a map to illustrate this statement.

2. " The East Indies form stepping stones from Asia to Australia." Why is this specially true with regard to air-routes ? Draw a map to illustrate this statement.

3. Java exports sugar, rubber, tea, coffee, cocoa, tobacco, quinine, spices and palm oil. She imports cotton goods, machinery, motor cars, rice and fish.

What do these lists reveal concerning the economic development of the island ?

Can you suggest why it is necessary to import foodstuffs, such as rice and fish ?

4. Draw a diagram to show the following exports from British Malaya : Rubber, 58 % ; tin, 36 % ; copra, 3 %.

CHAPTER III

CHINA

The Chinese Republic occupies one-twelfth of the earth's surface and contains a fifth of the world's people. Nearly all the Chinese are crowded together in the valleys and plains of China Proper, while the outlying parts of the Republic, such as Tibet, Mongolia and Manchuria, are very thinly peopled.

We are accustomed to think of the Chinese as an ignorant, backward people. So they are, according to our standards ; but increasing numbers of them are now adopting Western modes of life ; and, in any case, we must not forget that the Chinese have their own type of civilisation which has existed for more than four thousand years. Neither must we base our ideas of the Chinese on the cinematograph " thriller." The typical Chinaman is patient, industrious, frugal and painstaking to a degree which we Western peoples can scarcely realise.

CHINESE FARMERS

Millions of Chinamen earn their living by manufacturing, carrying goods, or trading ; but the vast majority of them are farmers who depend on the produce of the soil for everything they possess. As a farmer the Chinaman is something of a miracle-worker. For four thousand years he has been getting two, or even three, crops a year from the land, taking out of the soil vast quantities of plant-food and putting in very little animal or chemical manure ; yet the soil is now as rich as it was in the beginning. Under his skilful cultivation the land is indeed like the " widow's cruse of oil which faileth not." The open secrets of Chinese farming are the methods of irrigation, fertilisation and rotation of crops.

Irrigation supplies not only water in the exact amounts and at the exact times required by the plants, but also mud which helps to renew the fertility of the soil. Innumerable canals conduct the water from the rivers all over the lowlands, and it has been calculated that if all the canals of China were placed end to end they would pass eight times round the world. To lift the water from the canals to the fields various devices are employed, the most common being the treadmill, which is operated by the feet.

Though the mud which settles on the land from the water raised from canals helps to prevent exhaustion of the soil, it is not of itself sufficient. Often the Chinese farmer may be seen dredging mud from the bottom of a canal, and applying it as manure to his fields ; sewage, ashes and all kinds of refuse are also carefully saved and turned into fertiliser ; reeds and rushes gathered from the marshes or the hill-sides are worked into the soil ; and sometimes the farmer will even go to the trouble of moving the top layer of soil from a mulberry plantation to a rice field and *vice versa.* The time and labour involved in such operations is never begrudged if it will add in the slightest degree to the productivity of the land.

The chief crop grown throughout central and southern China is *rice.* But as this crop occupies the land for only four months the farmer may grow one, or even two, other crops on the same plot of ground. Wheat, barley, beans, clover and vegetables are the chief crops in addition to rice, and the " ignorant " Chinese farmer knows as accurately as the most learned scientist how to alternate these crops so as to secure the highest yield and maintain the fertility of the land.

Among the crops which are produced for sale, tea, silk and cotton are most important. *Tea* is the universal beverage in China. It is quite probable that the plant was introduced by enlightened rulers long ago in order to encourage the people to boil their drinking water, which is likely to be polluted by drainage from the fields. A century ago China supplied most of the world's tea ; now India and Ceylon hold first place and most of China's exports are in the form of " brick " tea, which is sent by land to Central Asia and to Russia.

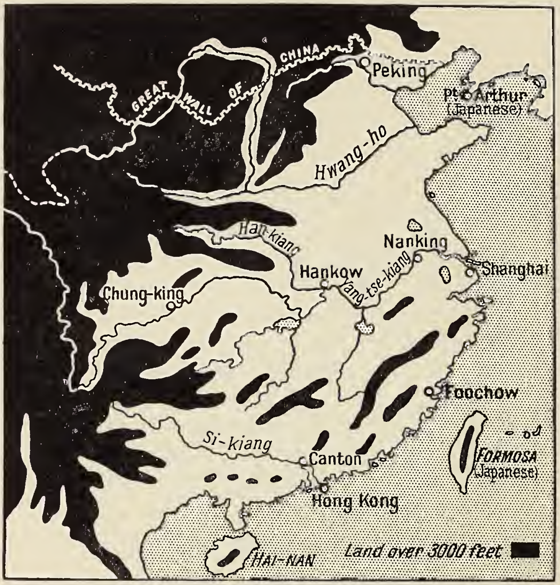


FIG. 20.—CHINA—RELIEF, RIVERS AND TOWNS

Silk.—China produces about one-third of the world's silk. In the centre and south the silkworm is fed on mulberry leaves, which are gathered daily from trees grown in plantations or on the ridges between the rice fields. The rearing of the silkworm is generally done by the women in their homes, as is also the " reeling " by which the silk is wound in a continuous thread from the cocoon.

Shantung, in northern China, produces the coffee-coloured " tussore " silk, which is obtained from " wild " silkworms fed on oak leaves.

Cotton is grown throughout China proper, but the quality of the crop is poor, and most of it is woven locally on primitive hand-looms.

THREE GREAT RIVERS

Nearly all the people of China live crowded together in the valleys and plains watered by three great rivers—the Hwang-Ho or Yellow River in the north, the Yang-tse-kiang or Blue River in the middle, and the Si-kiang in the south.

The basins of these three rivers show great differences of climate, and consequently of cultivated crops. We so frequently see pictures of the Chinese in thin cotton or silk clothing that we are apt to assume that the weather in China is always warm. It is true that summers are everywhere very hot ; even the far north of China is almost as hot as the equator in July ; and everywhere the people must wear very thin clothing in this season. In winter, however, there are great contrasts between different parts. In the **Si-kiang basin,** which lies across the Tropic of Cancer, the winters are as warm as our summers, and there is rain all the year round. Consequently three rice-crops a year can be obtained and a great variety of other tropical products can be grown, including oranges, bananas and pineapples.

In the **Yang-tse-kiang basin,** which lies in the same latitude as northern Africa, cold winds from the north-east make the winters almost as cold as our own ; " snow falls on the average for six days every winter at Shanghai ; skating is not uncommon at Hankow " (Kendrew). As a consequence crops such as oranges, bananas and pineapples, which require warmth all the year, cannot be grown, though, as we have seen, sub-tropical products like rice, cotton and tea can be grown during the hot summer.

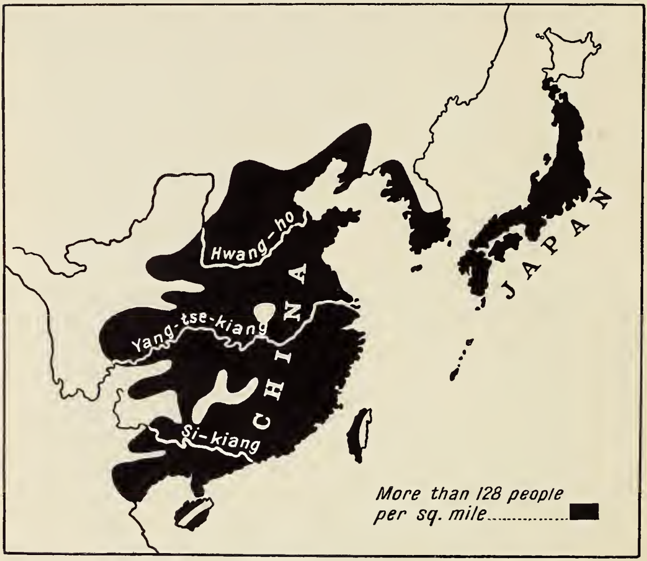


FIG. 21.—THE DENSELY PEOPLED PARTS OF CHINA AND JAPAN

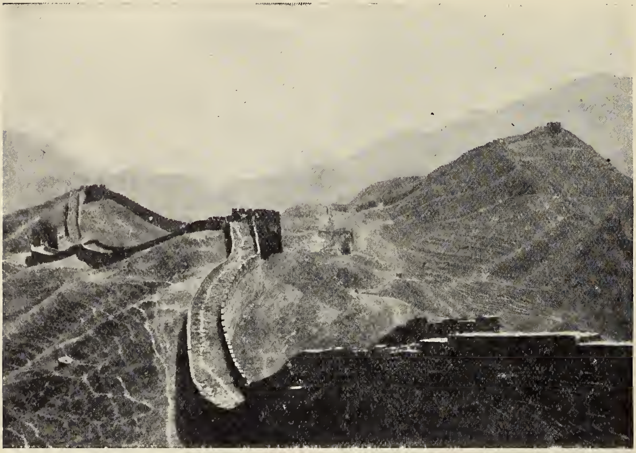
A particularly fertile part of the Yang-tse-kiang basin is the *Red Basin* of Szechwan, so called because the soil is red. Here a wonderful system of irrigation, devised by two Chinese engineers some thousands of years ago, has provided " waters so abundant that though drought may exist all round, this vast oasis remains a paradise of fertility and beauty."

As we go northward into the **Hwang-ho basin,** the winters become much colder. In the same latitude as southern France, there is continuous frost for many weeks every winter, and sometimes sixty or seventy degrees of frost are experienced. Obviously the people of northern China cannot then wear thin garments ! They *do* wear cotton clothing, but it is made on the same principle as an eider-down—two layers of cloth padded with cotton down.

As the winters are long and cold and as there is not a great deal of rain even in summer, the people of the Hwang-ho basin do not grow much rice. Their chief food crops are wheat, millet and the soya bean. This last-named crop is ground into flour, or pressed to give oil for lighting or for cooking ; from it pungent sauces are made to add to tasteless dishes of vegetables ; and the stalks of the plant are used for fuel. Moreover, large quantities of the beans are now exported to western Europe, where they are crushed for oil which is used for a great variety of purposes.

The Hwang-ho has two nicknames—" *Yellow River* " and " *China's Sorrow*," both of which it owes to the great quantities of yellow mud which it carries. This mud is derived from a very interesting kind of soil, which is called " *loess* " from a German word meaning " loose." Geologists tell us that it is merely dust which has been blown from the deserts of central Asia and deposited in the upper part of the Hwang-ho basin to a depth of several hundred feet. The loess is so " loose " that roads which started on the level of the plateau have been worn down until they are at the bottom of deep gorges. Houses, sometimes with two or more stories and fitted with doors and windows, are often excavated from the sides of the loess cliffs. Water quickly soaks through the loess, leaving the surface of the plateaus dry and barren, but in the river valleys where plenty of water is available, it is very fertile and yields great harvests of wheat, millet, cotton and vegetables.

When the Hwang-ho reaches the great plain, part of its burden of yellow mud settles to the bottom, thus building up the bed of the river. This makes irrigation easy, and so the plain of the Hwang-ho is very densely peopled. But the raising of the river bed also increases the danger of floods.



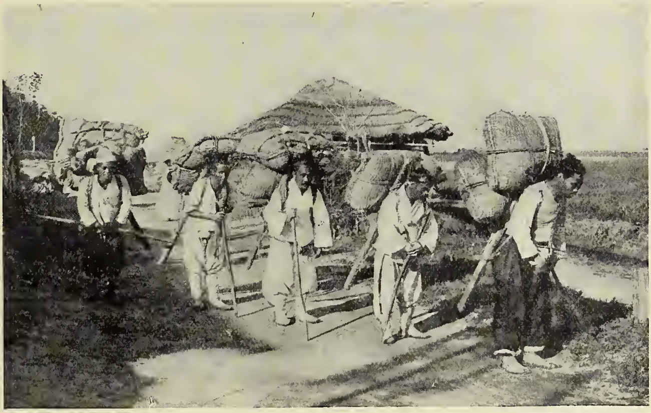
(*C. P. R.*)

FIG. 22.—THE GREAT WALL OF CHINA

Every few years there is a flood which drowns thousands of people and renders tens of thousands homeless ; and once every ten years or so there is a flood which affects millions of people. In 1861, for instance, the Hwang-ho burst its banks and drowned over a million people. Well may the river be called " China's Sorrow " ! The only way to prevent such disasters is to carry out the motto of the Chinese engineers who devised the irrigation system of the Red Basin: " Dig the bed low, build the banks high." But this requires money, time and labour and a strong government to see that the work is done. Unfortunately the Chinese government is not strong enough to carry out such schemes.

TRANSPORT IN CHINA

The chief transport animal in China is man. Animals cost too much, eat too much, and take up too much room!

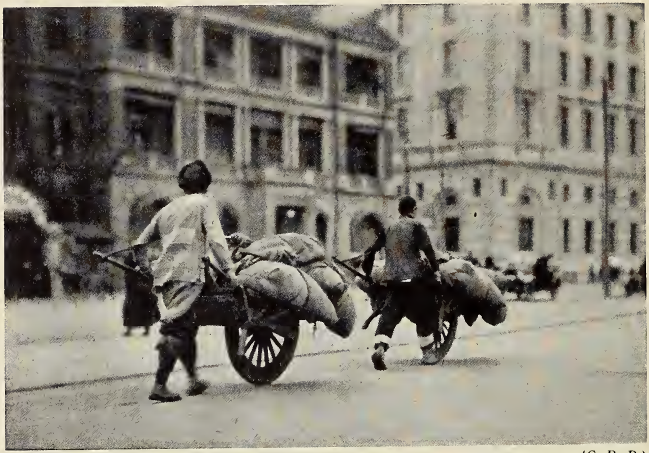


(*Korean Railways*)

FIG. 23.—COOLIES CARRYING RICE

A Chinese coolie will carry 80 pounds 20 miles a day for a few pence. They stack the burden on a kind of shelf which is strapped to the back and provided with a leg to take the weight when the carrier stops to rest (*cf.* fig. 23). The most usual method of carrying burdens, however, is in baskets suspended at opposite ends of a bamboo pole which is laid across the shoulders.

Almost the only vehicle used in central and southern China is the wheelbarrow. This is constructed on a more sensible plan than our wheelbarrows, the wheel being placed in the middle, with the goods piled on a platform around it (see fig. 24). Thus all the weight is on the wheel, and one man can push a load of five or six hundredweights. "The same type of vehicle is one of the common means of transporting people, especially women, and four, six and even eight may be seen riding together, propelled by a single wheelbarrow man."[1]



(*C. P. R.*)

FIG. 24.—WHEELBARROWS IN A SHANGHAI STREET

The widespread use of the wheelbarrow makes it unnecessary to construct wide roads. Most of the roads of China are mere paths, on which people must travel single file, and there are cities of many hundred thousand inhabitants without a street wide enough to take a cart.

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[1] F. H. King, *Farmers of Forty Centuries.*

The Chinese also make great use of their rivers and canals, which are navigated by junks and sampans. Though they were probably the first people to make canals for navigation, they never hit on the idea of constructing locks. Instead, stretches of canal at different levels are connected by sloping slip-ways, the boats being hauled up or let down by gangs of men. In the same way junks are hauled up rapids on the rivers.

In winter, when the river is low, native boats going up the Yang-tse-kiang from Hankow to the Red Basin carry fifty or a hundred " trackers " who drag the boats through the gorges. " The ' trackers ' make a peculiar movement ; their steps are short and with each they swing the arms and body forward, stooping so low to their work that their hands nearly touch the ground, and at a distance they look like quadrupeds. Away they go, climbing over the huge angular boulders of the river banks, sliding on their backs down spurs of smooth rock, climbing cliff walls on each other's shoulders, or holding on with fingers and toes, sometimes on hands and knees, sometimes on shelving precipices where only their grass sandals save them from slipping into the foaming race below " (Mrs. Bishop).

In summer, however, when the monsoon rains have swollen the rivers, steamers can get up to the Red Basin, and steam tugs haul up lines of barges.

China is such a crowded country that millions of her people cannot find room to live on the land, and the lower courses of the rivers are crowded with house-boats in which families spend their whole existence. They earn their living by acting as carriers for goods and passengers, by selling meals to passing boats, or by keeping flocks of ducks which they move from one part of the river to another in search of food.

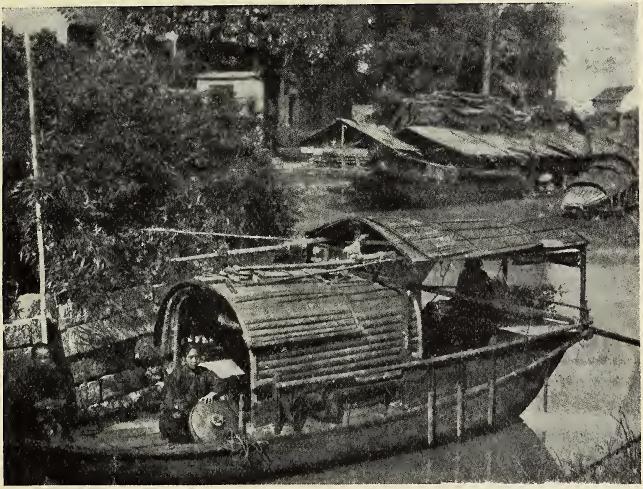
Railway development in China has been hindered by lack of capital and by the unsettled state of the country. There are, however, some seven thousand miles of railway in the Republic. Pekin is the centre of the railway system; from it lines diverge to Manchuria, Mongolia, Nankin and Hankow. From Hankow the railway continues southward and will eventually link up with a line which runs northward from Canton.

(C. P. R.)

Fig. 25.—A CHINESE STREET

THE CITIES OF CHINA

In the nineteenth century Britain, France and Germany compelled China to grant them tracts of land on which trading stations could be established. On these "concessions," as they are called, have grown up great cities which are quite European in character. In some cases the Treaty Ports are entirely separate cities, but more usually they are strictly European "quarters" of native cities.



(Presbyterian Mission Board)

FIG. 26.—A CHINESE HOUSEBOAT

Pekin, situated on the Pei-ho, was the capital of China for a thousand years before it was replaced by Nankin, the present capital. It consists of two parts, the rectangular Manchu city which is surrounded by four high brick walls, and the Chinese city.

Tientsin, the port for Pekin, is situated at the head of ocean navigation of the Pei-ho.

Shanghai, on a tidal creek at the mouth of the Yang-tse-kiang, is the chief port of China. Though developed by the

British as a treaty port, its population of one and a half millions is mainly Chinese. It has many large factories in which the natives work long hours for little pay, making low-grade cotton cloth.

Nankin was the capital of China for a brief period in the fourteenth century and was again made capital in 1928.

Hankow, situated where the Yang-tse-kiang is joined by the Han river, is the greatest inland trading centre of China. It can be reached by ocean-going steamers and is, therefore, a busy port. It is also a great industrial centre having many textile factories, metal works and saw-mills.

Canton, at the mouth of the Si-kiang, is a typical Chinese city, with narrow winding streets lined with open-fronted shops and roofed over with matting or oiled paper. Nearly a third of the people of Canton live in boats. On the island of Shameen, which is separated from Canton by the Pearl river, is the European quarter.

Hong Kong, which is owned by Great Britain, is a small granite island seventy miles off the mouth of the Si-kiang.

On the northern side of the island is the city of Victoria, which is built in terraces on slopes so steep that tramcars are hauled up by cables. On the mainland and separated from Hong Kong by a deep, narrow channel, is the British territory of Kowloon. Between the two is a third city: " a mid-strait city of sampans, junks and coastwise craft of many kinds segregated in obedience to police regulations, into blocks and streets with each setting sun, but only to scatter again with the coming morn " (F. H. King).

Hong Kong collects goods from all parts of China for export to other countries, and is also the centre from which imports are distributed all over China.

THE OUTLYING PARTS OF CHINA

MANCHURIA is the only one of the dependencies of China which is at all densely peopled. It has a rich, fertile soil, and in spite of the extremely cold winters produces large crops of wheat, millet, maize and soya beans. In recent years it has been colonised by Chinese who have fled from famine-stricken areas in the Hwang-ho basin. In 1928 Manchuria received a million such immigrants, and for several years before that had received an average of half a million per year.

For many years Japan has been hoping to obtain control of Manchuria in order that she may send colonists there, work the rich deposits of coal, iron and other minerals, and build up a market for her manufactured goods. She owns most of the mines and the railways and has compelled China to allow her to maintain troops in the country in order to protect the Japanese and their property. In 1931, in spite of the opposition of America and the League of Nations, she made the weakness of the Chinese government an excuse for military operations which have given her a large measure of control of Manchuria.

A portion of Manchuria has recently separated from the Chinese Republic, and proclaimed itself a separate state.

Dairen (Port Arthur) is a Japanese ice-free port at the terminus of a railway which branches from the Trans-Siberian Railway. **Harbin** and **Mukden** are important railway centres and manufacturing cities.

MONGOLIA.—The greater part of this vast territory is a desert plateau inhabited by nomadic tribes, who tend herds of camels, horses and sheep and live in movable tents of lattice-work and fur. "The main means of barter and exchange is brick tea, the Mongol giving his hides or wool and his horse-flesh in exchange for this, his staple drink."[1]

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[1] D. Carruthers.

Here and there are fertile valleys watered by streams from the mountains. In one such valley is situated the capital, **Urga.**

The greater part of Mongolia is now quite independent of China, and only inner Mongolia is really part of the Chinese Republic.

SIN-KIANG is a region of high mountains, broad plateaus and deep basins. It is practically rainless, except on the mountains, and so is absolute desert except where streams fed by melting snows irrigate small areas of lowland. In such oases are situated the famous cities of **Yarkand, Kashgar** and **Khotan.**

TIBET is a great plateau seamed by high mountain ranges and scored by deep valleys. Most of the land is uninhabitable, but some parts support scanty flocks of sheep and herds of yaks, and in the valleys are a few oases of cultivation. **Lhasa,** the capital and holy city of the lamas or priests, is situated on a tree-clad plain amidst the hills.

EXERCISES

1. Make a list of ingenious devices used by the Chinese, and of things which the Chinese were the first to invent.

2. Draw a map of China showing the three great rivers, and on it write the principal crops grown in each river basin.

3. On an outline map of China mark the following towns, and near each draw a pair of thermometers of height proportional to the January and July temperatures at that place :

—	Pekin.	Shanghai.	Hankow.	Hong Kong
Jan. Temp. (° F.)	23	38	38	60
July. Temp. (° F.)	79	80	83	82

4. Complete the following sentences from a study of the above figures :

"Northern China has . . . winters than southern China."
"Both northern and southern China have . . . summers."
"Northern China has an . . . climate ; southern China has an . . . climate."

5. Choose one of the following subjects and prepare interesting matter for a talk to the class : (*a*) How people travel in China ; (*b*) Things in which the Chinese excel ; (*c*) Chinese life in town and country ; (*d*) Recent events in China.

CHAPTER IV

THE JAPANESE EMPIRE

Japan proper consists of a group of islands—**Yezo, Honshiu, Shikoku, Kiushiu,** and hundreds of smaller ones—which lie on the eastern side of Asia in roughly the same latitudes as France and Spain. To these have been added other areas, notably the island of **Formosa,** and the peninsula of **Korea,** so that the Japanese Empire forms a narrow fringe bordering the Asiatic coast for a distance of 1,700 miles (see fig. 27).

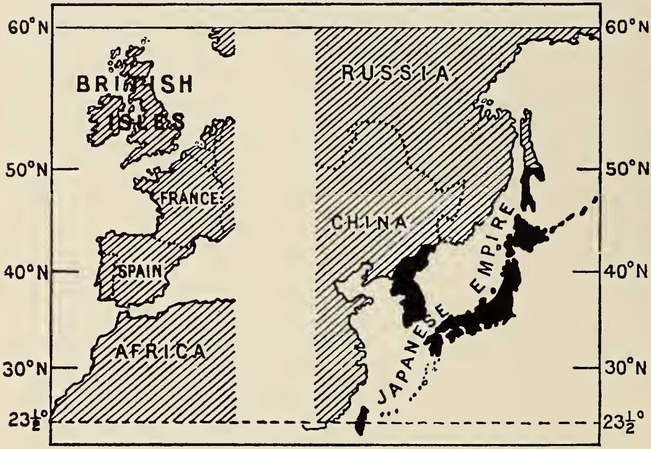
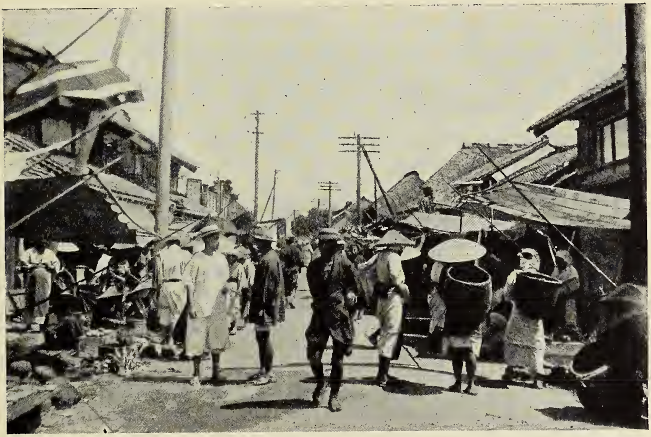


Fig. 27.—comparison of the latitudes of japan and western europe

Little more than sixty years ago the Japanese were content to live as their ancestors had done for thousands of years and refused to have anything to do with Western peoples. Then quite suddenly they decided to adopt as much as possible our civilisation. They built railways, factories and steamships, opened their ports to overseas trade, and set out to become a great manufacturing and commercial nation. They felt, too, that it was necessary for them to have an army and a navy to match those of European countries. After defeating first China and then Russia, Japan established herself as one of the Great Powers of the world.



(C. P. R.)

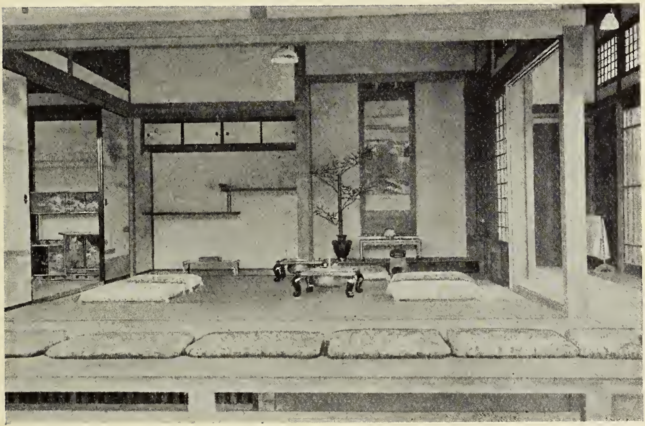
FIG. 28.—STREET IN A JAPANESE VILLAGE

When we think of Japan we think also of sunny skies, peach-blossom and chrysanthemums, charming miniature gardens and dainty silk-clad ladies sipping tea in rooms which are open to sun and breeze. But Japan is not nearly so pleasant a place to live in as such pictures make it seem. There are only two months in the year—April and September—in which we should find the weather agreeable. In winter even southern Japan, which is in the same latitude as southern Spain, is often bitterly cold, since then the *north-west monsoon* blows from the frozen interior of Asia. In summer, when the *south-east monsoon* blows from the Pacific Ocean, the weather is so hot and sultry that even the Japanese become listless and subject to disease. In April, though the wind is still chilly, the weather is bright and sunny, and the cherry-trees and peach-trees are laden with the blossom which we so frequently associate with Japan. In September there is another brief spell of mild, sunny weather, which coincides with the flowering of the chrysanthemums.

Japan is sometimes called "*The Britain of the East*"; but if we travelled through the country we should see many strange things and comparatively little to remind us of our own land. In the great commercial ports there are, it is true, many ocean liners and large cargo steamers, but there are also thousands of queer-looking junks and other small craft. In the busy manufacturing cities there are well-equipped factories, wide streets, ferro-concrete buildings and electric tramways; but the streets are often unpaved, the shops are open-fronted and display brightly coloured banners after the manner of the East, and the man-drawn jinricksha is more in evidence than the motor-car.

The dress of the townspeople varies considerably. Many of them wear European dress, but large numbers still retain the kimono, the coolies wear blue cotton smocks and tight-fitting trousers, while the straw raincoats and huge straw hats which are commonly worn by the country people are often to be seen in the city streets also.

It is in the country districts, however, that we should see most difference between Japan and Britain. Here we should see the Japanese living and working in the way their ancestors have done for two thousand years. Nearly all of them are peasant farmers who live crowded together in tiny villages set amid the rice-fields. Their houses are toy-like structures consisting of a framework of bamboo, supporting walls that are little more than paper screens. These can be moved at will, so that the whole house can be thrown open to air and sun. In winter wooden shutters are hung over the outside walls and the occupants warm themselves over braziers in which charcoal is burned ; but even so, the rooms remain uncomfortably cold.



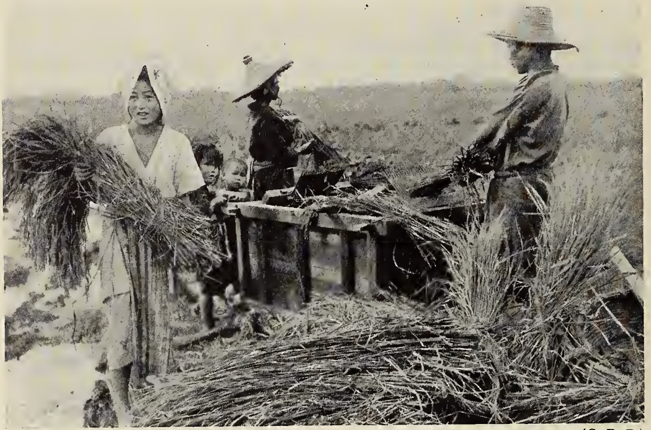
(*C. P. R.*)

FIG. 29.—A ROOM IN THE HOUSE OF A JAPANESE ARISTOCRAT

The furniture consists mainly of white or straw-coloured mats, which are kept spotlessly clean, since everyone takes off his shoes before entering the house. The Japanese pride themselves on not " making a street of their homes," though they frequently remove the fronts of their houses so that they are quite open to the street !

One reason why the Japanese continue to build such houses is that their very flimsiness enables them to withstand the earthquakes by which Japan is so frequently visited.

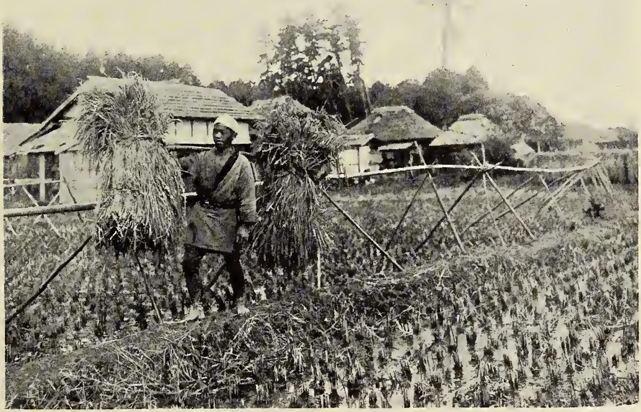
In the case of minor earthquakes, they simply sway about, instead of collapsing as they would if they were more solidly built. Even when severe earthquakes overthrow the houses, little damage is done by the mere collapse of the buildings. The chief danger is due to the fires which almost inevitably break out when the wood and paper walls fall on oil lamps or charcoal fires. In 1923, for example, nearly 100,000 people were burnt to death after the earthquake which destroyed Yokohama and Tokio.



(*C. P. R.*)

FIG. 30.—THRESHING RICE

Since 75 per cent. of the surface of Japan is uncultivable mountain land the great majority of the people live on the small plains which lie between the mountains and the sea. So great is the demand for land on these plains that the farms are little larger than gardens ; indeed the average size of a farm in southern Japan is only 3 acres, slightly larger than a full-size football pitch. That such small plots of ground can produce enough food to support a family is a tribute to the skill and patience of the Japanese farmer. His chief crop is rice, since it is the staple food of the Japanese and grows well in the hot, moist summer. Nearly half the cultivated land in Japan is given up to rice-growing, and so great is the demand for level rice-land that many of the lower hill-slopes are covered with terraces upon whose construction an incredible amount of labour has been expended.



(C. P. R.)

FIG. 31.—DRYING SHEAVES OF RICE

As in China the land can be made to produce two crops of rice per year, or one crop of rice plus another of peas, beans, barley or vegetables.

Though the Japanese farmer devotes most of his land to the cultivation of food crops, he usually has small patches on which he grows mulberries and tea. The mulberry leaves are fed to silkworms, the rearing of which is a spare-time occupation for the women and children.

The tea plant is cultivated chiefly on the terraced hillsides. In some districts straw mats are used to protect the bushes from excessive rain or sunshine, and the resulting crop is of very high quality, the very best of it being sold for as much as fifteen shillings a pound. Nearly all the silk and tea produced is exported to the United States of America.

The Japanese keep few domestic animals because the lowlands are too valuable to be used for pasture, while the highlands grow only coarse grass which is unsuitable for either cattle or sheep. Peas, beans and fish take the place of meat in the national diet, since these contain the same food substance (protein) as lean meat.

Fishing is, next to agriculture, the chief industry of Japan, and more fish are landed there than in any other country in the world. In addition to fishing by lines and nets, the Japanese frequently use certain fish-eating sea birds, called cormorants, round whose throats rings are placed so that they cannot swallow large fishes. Lights are held over the sea to attract the fish, and the cormorants, which are secured by strings, are allowed to dive for them, and then forced to disgorge their prey into the boat.

INDUSTRIES AND TOWNS

Though the Japanese farmers and fishermen work so hard and so skilfully, they cannot produce enough food for all the people. Large quantities of rice, wheat and other foodstuffs are imported and these have, of course, to be paid for by exports. The Japanese government has, therefore, encouraged the development of manufacturing industries.

The chief industrial regions are situated around the "Inland Sea" of southern Japan. **Osaka,** with a population of over two millions, is the largest city of Japan. It is the centre of the cotton-manufacturing industry and is, therefore, sometimes called the "*Manchester of Japan.*" **Nagoya** is specially noted for the manufacture of silk, and **Kobe** is the chief port of the region. **Kioto,** the ancient capital, is situated in the middle of a great hollow which runs from north to south across the island of Honshiu. **Tokio,** the present capital, has a population of two millions, a large proportion of whom are engaged in miscellaneous manufacturing industries. **Yokohama,** situated some 20 miles from Tokio, is the chief port of Japan, and is particularly noted for its exports of raw silk.

Though in these and other cities there are many large factories each employing great numbers of workpeople, the great majority of Japanese factories are very small and most of them employ less than five people each. In such factories, which manufacture brushes, cutlery, pottery, lacquer-ware, paper, and other small articles, nearly all the work is done by hand.

The wages of the workpeople in both the large and small factories are very low and the hours of work very long. The usual wage for a woman working 10 hours a day is only equal to half a crown in English money. Though the workers are neither so quick nor so skilful as those in our own country, the low wages and long hours enable Japan to sell certain kinds of cotton cloth and other manufactured goods more cheaply than we can. Consequently Japan has become a great competitor of Britain in India and China.

NORTHERN JAPAN

The foregoing account refers only to those parts of Japan Proper lying between latitudes 40° N. and 30° N. A population map shows that north of 40° Japan is very thinly peopled. This is mainly because the summers are not long enough for rice to be easily cultivated. Possibly people of other races could manage to grow such crops as potatoes, oats and rye, but the Japanese are essentially rice-growers, and do not like living in districts where rice cannot be grown.

The islands of Yezo and Sakhalin have large reserves of coniferous forest.

KOREA

Korea is sometimes called " The Land of Morning Calm," possibly because it is not subject to the earthquakes, typhoons and floods which do so much damage in China and Japan. The latter country added Korea to her empire after her defeat of Russia in the war of 1904–1905. The peninsula was then a very backward region, whose inhabitants lived in a primitive manner, and took little advantage of the natural fertility of the land.

Since taking over the government of the country Japan has greatly increased its productivity. In the east the mountains, which had been stripped bare of forest, have been replanted with trees ; the western plains have been made to yield greatly increased crops of rice, silk, cotton, tobacco and fruit ; gold, iron and other metals are now worked where formerly the Koreans were afraid to dig lest they disturb the dragons which, they thought, slept just below the surface ; railways have been built, and *Fusan*, *Chemulpo* and other towns have become busy ports and industrial centres.

In spite of these improvements, the Koreans dislike Japanese rule, which, they complain, is harsh and oppressive. They themselves prefer to live in the old way, and the Korean villages are still noteworthy chiefly for dirt and smells. The houses are made of mud plastered over a rough framework of wood. The extremely cold winters have led the Koreans to devise a primitive form of " central heating," by which smoke and hot air are led under the floor from fires outside the building.

FORMOSA

This island was taken by Japan from China in 1895. It resembles Korea in that its eastern half is mountainous, while its western half is composed of fertile plains and plateaus. It differs from Korea, however, in having warm and moist winters, which make cultivation possible throughout the year. Rice is the chief crop on all the level ground, and here, as in Korea, the Japanese have introduced many improvements which have greatly increased the yield per acre. Over a large part of the island three crops of rice per year can be produced, so there is a large surplus, most of which is exported to Japan. Sugar-cane and tea are also widely cultivated, and camphor, which is prepared by distilling chips of camphor wood, is one of the chief exports.

Most of the inhabitants are Chinese, whose ancestors conquered the country many centuries ago The descendants of the original inhabitants are still to be found in the hilly eastern districts, and there are some 200,000 Japanese who conduct the commerce and the government of the island.

EXERCISES

1. Draw a diagram to show the following exports of Japan :

—	Raw Silk.	Cotton Goods.	Silk Goods.	Other Articles.
Percentage of total export	40	25	6	29

2. Japan's chief import is raw cotton. Where does it come from? Why does she not grow all her own cotton? Where does she send the cotton goods she manufactures?

3. Though Japan is such an important rice-growing country she has to import a good deal of rice. Why is this? How do her people earn the money to pay for the rice they import?

4. "The Japanese Empire is part of the festoon-like folds which fringe the whole of eastern Asia." Draw a map to illustrate this.

CHAPTER V

SOUTH-WESTERN ASIA—THE LAND OF THE FIVE SEAS

This region is the corner of the Old World which lies between Europe, Africa and India. It is bounded on the north by the *Caspian Sea* and the *Black Sea*, on the west by the *Mediterranean*, and on the south-west by the *Red Sea*. The Arabian Sea forms the southern boundary, but the *Persian Gulf*, which forms a kind of centre line, is the fifth of the seas which give this region its name.

The Land of the Five Seas lies in roughly the same latitudes as China and Japan, but if we turn over the pages of an atlas we shall see that there are many differences between the two sides of the continent. The greatest difference is in the density of population. China and Japan are among the most densely peopled areas in the world, while south-western Asia is one of the most scantily peopled areas. In fact, there are ten times as many people in China and Japan as in the same area in south-western Asia. Why is this? Strange as it may seem, the chief cause of the difference is the wind. Eastern Asia, as we have learnt, has monsoon winds, which blow from the land in winter and from the sea in summer; but south-western Asia has winds from the north-east—that is, from the middle of the continent—practically all the year round. Thus while the Chinese and the Japanese farmers have plenty of water when they most require it, and can grow enough on two acres to keep a family, south-western Asia is mainly desert.

Another cause of the difference is that south-western

Asia is a very mountainous region. Arabia is a great block of land, tilted like the Deccan of India so that its highest edge faces the west ; as a consequence of this tilt, the little moisture which is carried by winds from the Indian Ocean

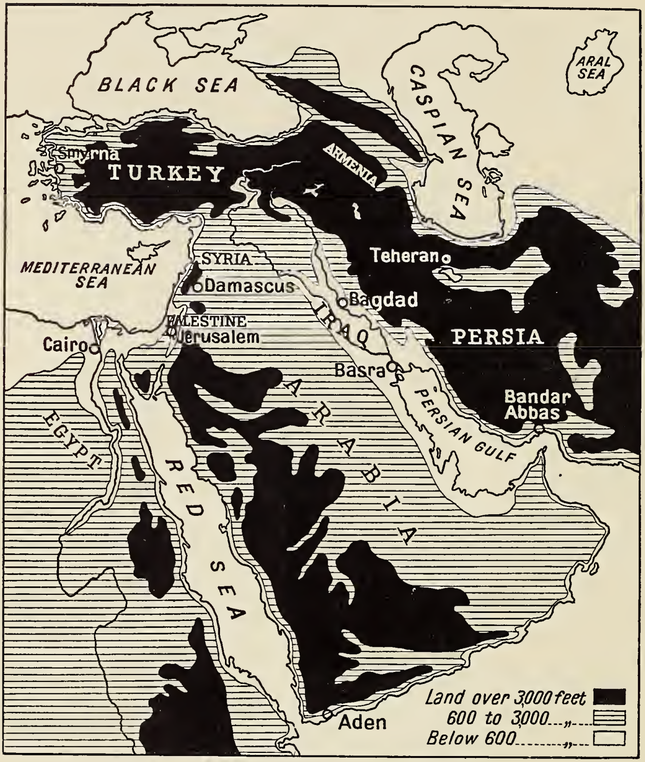


Fig. 32.—THE LAND OF THE FIVE SEAS

is condensed near the coast ; and so the interior of Arabia is one of the worst deserts of the world.

Again, running parallel to the shores of the Mediterranean in Palestine and Syria are other ranges which prevent westerly winds from bringing rain to the interior. The northern and eastern part, which comprises Asia Minor and Persia, is a tangle of mountain ranges, high plateaus and gorge-like valleys which could never support many people.

Yet this Land of the Five Seas was once the " Cradle of Civilisation " and contained some of the most enlightened and powerful nations in the world. Four thousand years ago **Mesopotamia,** which lies between the rivers Tigris and Euphrates, was the home of the great civilisations of the Babylonians and Assyrians. Their great cities, such as *Babylon*, *Nineveh* and *Ur*, were eventually destroyed, but patient students of ancient history have excavated the ruins and given us wonderful pictures of life as it was lived in those far-off days. Not only the records of the great events of the time, but even also the exercises of school-children, written on clay and later baked into brick, have been preserved and can now be seen in the museums.

Phœnicia was the strip of coast at the eastern end of the Mediterranean, in the lands we now call Syria and Palestine. The Phœnicians were the first great sea traders of the world, and a thousand years before the time of Christ they were a rich and powerful nation, who controlled most of the world's trade. Two of their great cities, *Tyre* and *Sidon*, are frequently mentioned in the Bible as examples of wickedness and luxury.

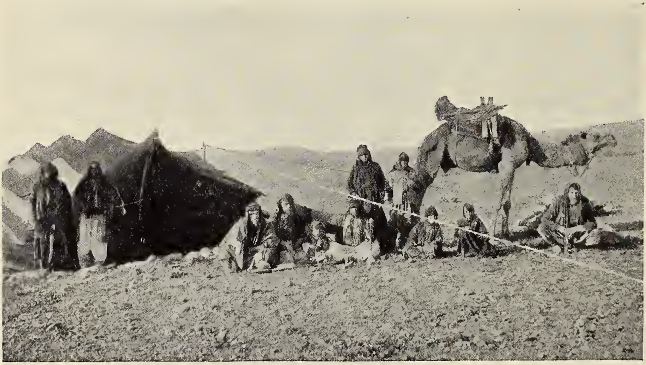
Palestine was, of course, the home of the Jews, who in the time of Solomon were a great trading nation, controlling the highway between Mesopotamia and Egypt. *Jerusalem*, the holy city of the Jews and the scene of the Crucifixion of Christ, is still the capital of the country.

Arabia is the home of the Arabs, who have spread the

Mohammedan religion throughout south-western Asia and northern Africa. *Mecca*, where Mohammed was born, is the chief holy city of the Mohammedans, others being Medina and Jerusalem.

HOW THE PEOPLE LIVE

(1) **Nomads.**—The greater part of the Land of the Five Seas is so dry that the only way by which people can earn a living is by driving flocks and herds from one bit of pasture to another. In the Arabian desert the Bedouins rear herds of camels and flocks of sheep, which they drive from pasture to pasture and from well to well as did Abraham of old. In the mountainous districts of Palestine, Syria, Turkey and Persia sheep and goats are the only source of wealth of the nomadic tribes. Turkey is particularly noted for the Angora goat, which supplies the soft, silky wool known as *mohair*.



(*C. P. R.*)

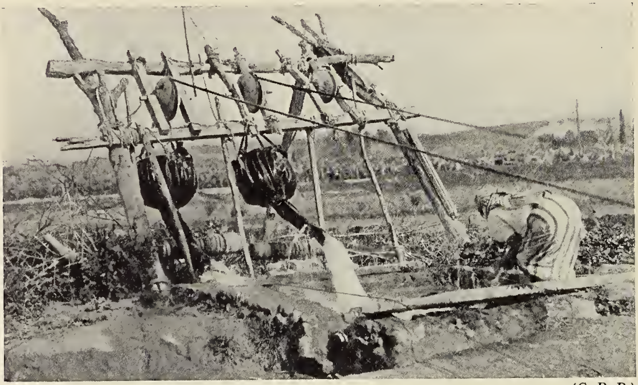
FIG. 33.—BEDOUIN CAMP IN THE DESERT

(2) **Settled Farmers.**—The only districts where land can be cultivated are those which are specially favoured with rain or facilities for irrigation. *Coffee* is grown around **Mocha** in the south-western corner of Arabia. Here, though there is very little rain, there are frequent mists which supply the necessary moisture. *Olives* are cultivated on the stony slopes which face the Mediterranean sea, and so get some rain in winter. Among the crops which require irrigation, oranges and dates are the most important. *Oranges* are grown principally on the coast of Syria, **Jaffa** being a well-known centre. *Dates* are grown in the oases of the desert and in the irrigated lands of Mesopotamia.

The methods of irrigation vary according to the water supply. In the oases, where the water is found in deep wells, the usual method is to raise the water by teams of oxen or mules which haul up large leathern buckets. Where there is a rapid stream water-wheels are often fixed so that as they are turned by the current they raise the water and pour it into a high level channel from which it is distributed to the surrounding land.

In Persia underground tunnels are built to collect the water from the slopes of the mountains and convey it to regions which nature has left waterless. All along the course of these tunnels are wells which enable the people to obtain water for irrigation and for domestic use. Finally the stream comes out at the surface in some valley, where it furnishes drinking water for man and beast. " It is also convenient for washing clothes, and the village butcher finds it to be a good place to wash his meat, as well as to dump his refuse. . . . Having watered and cleansed the community, the water passes out beyond the village into the real irrigation ditches, usually raised above the level of the alluvial plain. . . . The small plots they enclose are ploughed up with a yoke of oxen and an iron-tipped forked stick. After breaking up the ground three men use a very wide ridging spade which is pulled by ropes attached to either end. In this way a network of ridges is thrown up that hold the water in level patches on the ground."[1] On such irrigated land wheat, barley, opium poppies, melons and vegetables are grown.

In Mesopotamia the rivers Tigris and Euphrates contain abundant water for irrigation. When Babylon was at the height of its power numerous canals led the water over the whole valley ; but during succeeding centuries these canals were allowed to fall into ruin, and the land became desolate. When Britain undertook the government of the land at the request of the League of Nations, many of the old irrigation works were restored and hundreds of square miles of land have been thus reclaimed from the desert.



(*C. P. R.*)

FIG. 34.—DEVICE FOR RAISING WATER

(How does it work ?)

(3) **City Dwellers and Traders.**—Most of the cities and

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[1] Commodore B. Fisher, *Geographical Review*, April 1928.

villages in south-western Asia are composed of dingy mud-brick houses, whose blank outside walls face narrow, winding streets. Usually the houses have flat roofs. These are the special domain of the women, who are compelled by the Mohammedan religion to remain in seclusion.

The busiest part of the town is the bazaar, where native craftsmen fashion their wares and merchants haggle with customers in the open-fronted recesses which serve as shops. In the bazaars the various trades work together, " with the result that the din in the coppersmiths' quarter is deafening, while the smell in the tanners' quarter is equally trying. The bazaars are covered and have a pervading smell of fat used for cooking and the smoke of wood fires, which is never forgotten " (Sir Percy Sykes).

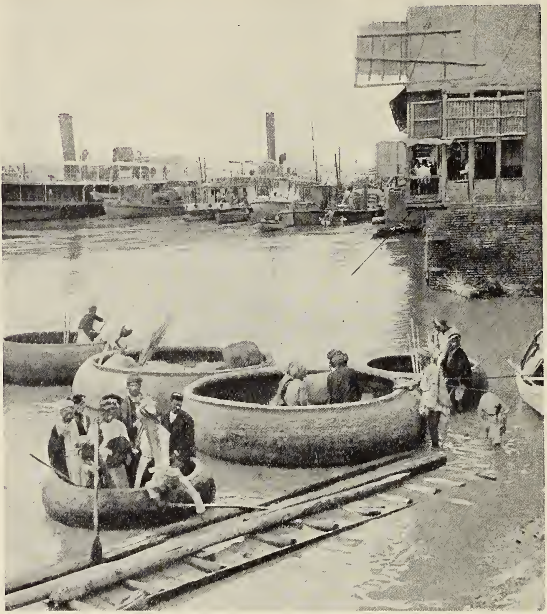
THE STATES AND THEIR CITIES

IRAQ is the name now given to Mesopotamia, the land around the rivers Tigris and Euphrates. Before the Great War it was ruled over by Turkey ; after the war the League of Nations asked Britain to control the country for a few years, and in 1927 it became an independent kingdom.

The chief crops of the country are dates, rice, wheat, barley and cotton. Iraq is the chief date-growing country of the world and produces about three-quarters of the world's supply.

Bagdad, which was for many centuries the chief city of the Mohammedans, is the capital of Iraq. It is at the meeting point of caravan routes from Syria, Arabia and Persia, and is linked by railway to the Persian Gulf. The so-called "*Bagdad Railway*" which was planned to link Bagdad with Constantinople is not yet completed, there being a gap of more than a hundred miles in northern Iraq.

Basra is the second city and chief port of Iraq. It is situated at the limit of ocean navigation of the combined rivers Tigris and Euphrates. It is sometimes known as the "*City of Dates*" because dates are by far the chief export.



(*C. P. R.*)

FIG. 35.—PRIMITIVE AND MODERN METHODS OF RIVER TRANSPORT (BAGDAD)

ARABIA.—This desert kingdom is sometimes called the "Isle of the Arabs" since it is bounded by the sea on three sides and by an almost impassable desert on the north. Three-quarters of the people live in the more fertile coastal strips, which receive a little rain. **Mecca** and **Medina,** the holy cities of the Mohammedans, have already been mentioned. **Jiddah,** the port for Mecca and Medina, exports some dates, wool, hair, hides and gum.

OMAN is a small independent state in the south-eastern corner of Arabia. **Muscat,** which is its chief town and port, exports dates of high quality.

PALESTINE was formerly under Turkish rule, but is now ruled by Britain under a " mandate " from the League of Nations. The most striking physical feature of the country is the long, narrow " *rift-valley* " in which lie the Dead Sea, the River Jordan and the Sea of Galilee. The country suffers from lack of rain, but sheep are pastured on the limestone hills, and vines and olives are grown on the more fertile slopes.

After the Great War the British Government, with the approval of the League of Nations, invited Jews from all over the world to settle in Palestine and make it their " national home." Scores of thousands have done so, and are developing lands which were formerly waste.

" Along the roads and railways blossom unexpected patches of scattered settlement. There are new houses of European aspect, entirely unlike the native huts, stone cubes scarcely distinguishable from the mountain slopes on which they stand."[1]

Jerusalem has been the chief city of Palestine for nearly 3000 years. It has the advantage of being situated on a defensible site near the centre of the country. The ravines, which surround the hill on which the city stands, hinder road transport, though a railway now runs from Jerusalem to the chief port, **Jaffa.**

SYRIA is a French "mandated territory." The Jordan rift valley and the bordering ranges continue northward through Syria, but are less clearly marked. **Beirut** is the chief port, and **Damascus** and **Aleppo** are important caravan centres.

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[1] A. Choveaux, *Geographical Review,* January 1927.

TURKEY is an independent country with its capital at **Angora.** The chief port, **Smyrna,** exports figs, sultana raisins, tobacco, opium, cotton, and acorn cups from which tannin is extracted.

ARMENIA is the mountainous home of an ancient race of Christians who have suffered greatly from oppression at the hands of the Turks. The only city of importance is the capital, **Erivan.**

PERSIA is a vast plateau surrounded by still higher mountain ranges. It suffers greatly from lack of rain, and many of its rivers dry up without finding a way through the encircling ranges of mountains. The chief commodities exported from Persia are *petroleum*, which is worked by the Anglo-Persian Oil Company, and *carpets*, which are woven in the homes of the people. **Teheran,** the capital and largest city, is the chief caravan centre and is specially noted for the manufacture of carpets. **Bushire** and **Bandar Abbass** are ports on the Persian Gulf.

AFGHANISTAN, though not, strictly speaking, one of the "Lands of the Five Seas," resembles them in its mountainous and desert-like character, and in the fact that it is a Mohammedan state. Although irrigation by underground channels is practised as in Persia, agriculture is possible only in specially favoured valleys. The **Khyber Pass,** which is thirty miles long and, in places, only fifteen feet wide, is the gateway to India. **Kabul,** controlling the western end of the pass, is the capital of the country.

EXERCISES

1. Copy from the Bible sentences and phrases which show that the Jews lived in a hot land where water and shade were very precious things.

2. Draw a sketch-map to show the course of the "Bagdad Railway."

3. Compare the positions and reasons for the importance of Smyrna and Aden.

4. Head a page in your exercise book: "News about the Land of the Five Seas."

On it paste newspaper cuttings dealing with recent happenings in those countries.

CHAPTER VI

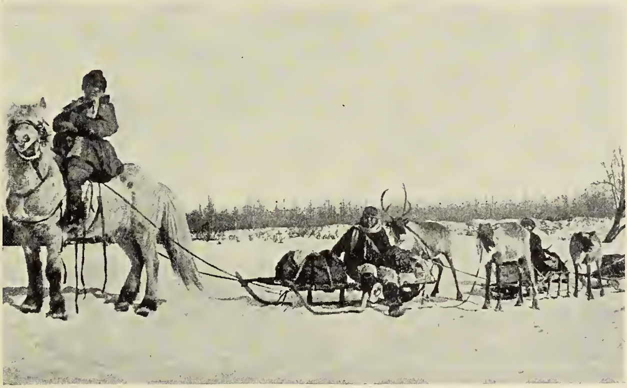
RUSSIA

Russia, or to give it its modern name, "**The Union of Socialist Soviet Republics,**" is the largest country in the world. It stretches from the Black Sea and the Baltic Sea on the west to the Pacific Ocean on the east, and from the Arctic Ocean to the mountains of central Asia, and occupies one-seventh of the land surface of the globe.

Why has Russia become such a large country? To find the answer we must consider both geography and history. The physical map shows us that practically the whole of Russia is a great plain, so it was easy for men to spread right across the land to the Pacific Ocean. The great hero of the Russian conquest of Siberia was an outlaw named *Yermak*, who, in the sixteenth century, marched through the land with a small band of followers, and quickly made himself master of a vast territory. He then returned to Russia and, it is said, presented the territory to the Czar in return for a free pardon for his former crimes.

Yermak was followed by fur traders and hunters, for whom the way was opened up by bands of Cossack soldiers. Later the Russian government established convict settlements in Siberia, and during the last century more than a million Russians were driven from Europe and compelled to settle in Siberia. At the end of the nineteenth century the *Trans-Siberian Railway* was opened and many colonists settled of their own free will along the line of the railway.

Siberia is, however, still an "empty" land. In all this vast territory there are only 12 million people—less than three persons per square mile on the average. Yet it is a land of almost boundless possibilities. It has more coal than the whole of Europe, as well as rich deposits of gold, silver, iron and other metals. Its rivers and lakes teem with fish, its forest area is the largest in the world, and its prairies are among the best wheat-growing and dairy-farming lands in the world. In the distant future all these sources of wealth may be developed to the full, and Asiatic Russia may rival North America in prosperity, but for many years to come the inhabitants will continue to live in a very primitive manner.



(*E. N. A.*)

FIG. 36.—PONY AND REINDEER SLEDGES IN SIBERIA

THE CLIMATE OF SIBERIA

Suppose you were compelled to live in Siberia for a few years, what kind of clothes would you need? Here is a list of the articles worn by Sir H. de Windt when he travelled by sledge across Siberia in the winter of 1901, in order to see whether it was practicable to build a railway from Paris to New York. " Two pairs of Jaeger singlets and drawers, then deerskin breeches and three pairs of worsted stockings. Over this a suit of Arctic duffle (a felt of enormous thickness), and a pair of deerskin boots reaching above the knee and secured by leathern thongs. Then a second pair of deerskin breeches and a long, loose deerskin coat reaching to the knees, with a hood of the same material lined with wolverine. Under this hood we wore two close-fitting worsted caps and a deerskin cap with ear flaps. Two pairs of worsted gloves and one of bearskin mits, reaching almost to the elbow, completed the outfit."

Even all this clothing was not sufficient to prevent his being chilled to the bone, for he passed through the coldest spot on earth—the " Cold Pole " at *Verkoyhansk*, where a temperature of minus 90° F. (122° of frost) has been experienced. The winter is not only severe but is also very long. Even in southern Siberia the rivers are frozen over for five months in the year, and in the north they are frozen solid for eight or nine months. The summers though short are warmer than ours and mosquitoes are a great plague in this season. The summer days are also longer than ours, so most of our ordinary field crops can be grown almost as far north as the Arctic Circle.

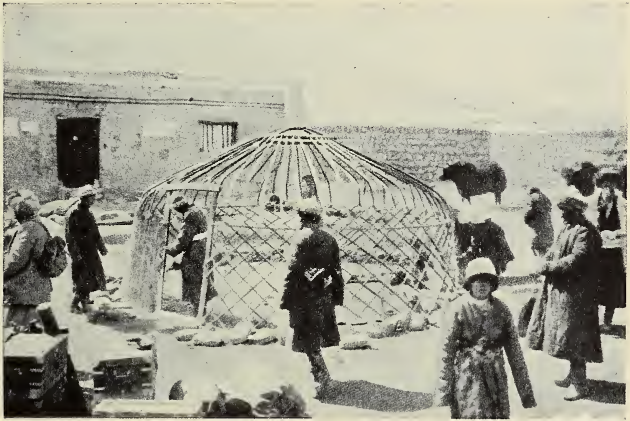
HOW PEOPLE LIVE IN SIBERIA

The vegetation map shows four belts of vegetation running from west to east, viz. :

(*a*) **Tundra** in the extreme north, where the soil is frozen all the year, except for two or three months in summer, when the top foot or so thaws, forming great swamps. The only inhabitants of this region are poor native tribes who get a living by hunting and fishing, or by the herding of reindeer.

(*b*) **Coniferous Forests.**—In this region live a few trappers and lumbermen. The chief furs obtained are sable, squirrel, ermine and fox. A little timber is cut in winter and floated down the rivers after the summer thaw.

(*c*) **Temperate Grassland.**—This is the chief farming belt of Siberia. Colonists from European Russia grow good crops of wheat, barley, oats, potatoes and sugar-beet. Before the Great War they had organised co-operative dairies, to which each farmer sent his milk, so that butter could be made cheaply and in large quantities for export.



(*E. N. A.*)

FIG. 37.—KIRGHIZ CONSTRUCTING A "YURT"

(When completed, large pieces of heavy felt cover the lattice framework)

(*d*) **Steppes.**—The drier grasslands and the slopes of the mountains of central Asia are the home of tribes of *Kirghiz* and *Cossacks*, who wander from place to place in search of pasture for their flocks and herds. They keep great flocks of sheep and goats, and sometimes camels, but the most prized animal of the plain dwellers is the horse. Even the poorest may own several hundreds. The chief animal of the highland Kirghiz is the yak, a kind of ox with long, hairy coat.

As the people are nomads, they live in tents which can easily be moved from place to place. The "*yurt*," as it is called, is constructed of a framework of lattice, upon which felts and skins are placed. The food of the people is chiefly meat and milk. They milk all their animals ; cheese is made from sheep's milk and goats' milk, while "*koumiss*," a fermented drink, is made from the milk of mares and camels.

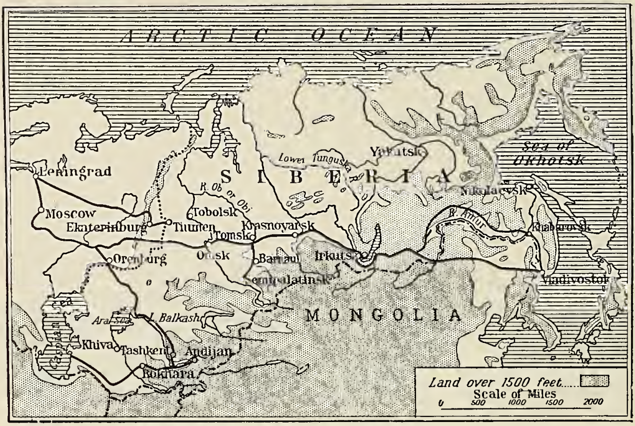


FIG. 38.—THE TRANS-SIBERIAN RAILWAY

Formerly the nomads wandered all over the region which is known as Turkestan. In modern times, however, the best land has been taken up by Russian colonists, who grow wheat, cotton, millet and other crops on land which is irrigated by mountain streams.

THE TRANS-SIBERIAN RAILWAY

This is by far the longest railway in the world. From Leningrad on the Baltic to Vladivostok on the Pacific is a distance of 5,500 miles (see fig. 38).

In the west the line passes through the best farming lands of Siberia. **Omsk** is the chief city of this region, and the centre of the trade in dairy produce. **Tomsk** was once the largest city of Siberia, but suffered from the fact that the main line passes many miles to the south of it, though it can now be reached by a short branch line.

The middle third of the railways passes through a district rich in coal, iron, gold and other minerals. **Irkutsk** is the chief city of this region. The Siberians have called it the "*Paris of Siberia,*" but it is " an unfinished, slipshod city, a strange mixture of squalor and grandeur, with tortuous ill-paved streets, where the wayfarer looks instinctively for the ' no thoroughfare ' board."

The eastern third of the railway follows the valley of the Amur, through land which has valuable forests and minerals.

Vladivostok is the Pacific terminus of the railway.

RUSSIA IN EUROPE

The Russians themselves do not make any distinction between the European and the Asiatic parts of Russia, but think of their land as one big country. Yet European Russia is so much more densely peopled that it is worthy of closer study.

The country is one vast plain, stretching from the Arctic Sea to the Black Sea and the Caspian. Except in the Urals and Caucasus there is no high land. Even the Valdai Hills, which rise to over 1,000 feet, are so far from the coast that the slope of the land is hardly noticeable. The gradient to the nearest sea is, indeed, less than five feet in a mile, and the Volga River, which flows from the Valdai to the Caspian, a distance of 2,325 miles, has an average fall of only 3 inches per mile. The slow-flowing rivers have always formed the chief means of transport in summer. In winter, however, the land is covered with frozen snow and travel by sledges is easy in any direction. Until recently, therefore, the Russians have not felt the need for good roads and railways. Nowadays, however, they are making great efforts to bring their transport system up to date.

THE NATURAL REGIONS

The vast majority of the Russian people are peasant farmers, but the country is so vast that there are great differences in the life of the people in the different parts. In the extreme north, around the White Sea is the **Tundra** region, which has already been described (p. 68).

South of this is the region of **coniferous forest,** where lumbering and trapping are the chief occupations of the scattered inhabitants. Here and there are widely separated clearings, made by burning the forest. The wood ashes fertilise the ground, and for one or two summers scanty crops of rye and potatoes may be grown. But the soil is soon exhausted and then the family must move on to a fresh clearing.

Archangel, situated at the mouth of the Dwina, and connected to Moscow and Leningrad by rail, is the chief town and port of the region. It exports timber and furs, but suffers from the fact that its harbour is closed by ice for six months.

Murmansk, though some five hundred miles farther north than Archangel, is free from ice, since it is more exposed to the westerly winds from the Atlantic Ocean and receives some benefit from the Gulf Stream. It is connected to

Leningrad by rail and competes with Archangel as an outlet for northern Russia.

South of the coniferous forest is a wedge-shaped area of **deciduous forest.** Here the soil is more fertile and the summers are long enough for the cultivation of rye, barley, oats, potatoes and flax. About half the land in this section has been cleared, but the villages are widely separated, often by miles of virgin forest, swamp and peat-bog. The peasants are therefore compelled to grow or make nearly everything

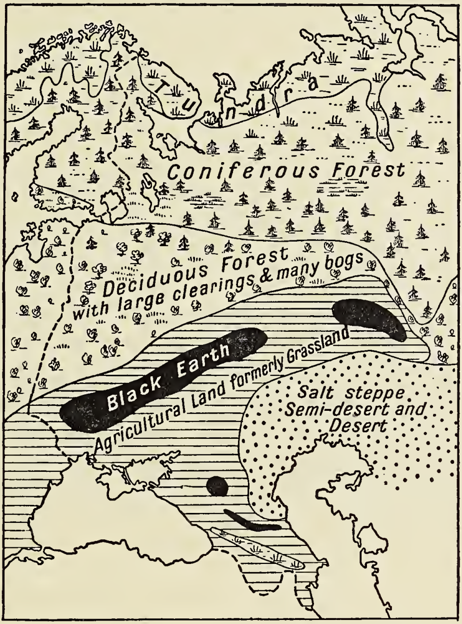

Tundra
Coniferous Forest
Deciduous Forest with large clearings & many bogs
Black Earth
Agricultural Land formerly Grassland
Salt steppe Semi-desert and Desert

FIG. 39.—RUSSIA : NATURAL VEGETATION

they require. All the houses are built of wood, and most of them consist of only one room, which may also shelter the pigs and the poultry. A large part of the floor space in the room is taken up by a great closed stove, in which logs are burned during the long cold winter. Around the room is a wide bench which is used as a seat in the daytime and as a couch at night—unless the weather happens to be so cold that the family find it more comfortable to sleep on top of the stove ! In this forest belt are situated some of the largest towns in Russia.

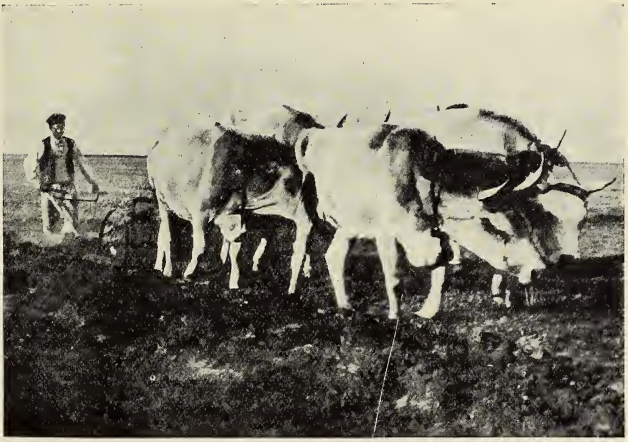
Moscow, the present and historic capital of Russia, is situated on a tributary of the Volga. Its central situation makes it the most convenient point from which to govern the whole country ; indeed, Russia grew up around Moscow, and the early history of Russia is largely that of the gradual extension of the power of the Princes of Moscow in all directions, so that their descendants eventually became " Czars of all the Russias."

In modern times it has become the greatest manufacturing centre of Russia, with great textile factories and machine shops. The **Tula** district, some distance to the south of Moscow, produces coal, but it is of poor quality, and the Russians are now beginning to use peat, which occurs in vast beds in the surrounding country, for the production of electricity to supplement the coal supply.

Leningrad is built on the low swampy delta of the river Neva. It was built by Peter the Great, as an outlet for Russia towards the west—her " window to Europe " as Peter termed it. The Russians did not like the new city, but the Czar compelled many thousands of them to go and live there. He built docks, factories and magnificent palaces, and made the city his capital. So it remained until the Russian Revolution of 1917, when the Bolsheviks seized control of the country and re-established Moscow as the capital. At the same time they changed the old name

"St. Petersburg" or "Petrograd" (Peter's town) to Leningrad, in honour of the chief revolutionary leader.

The city has declined somewhat in importance since it ceased to be the capital, but is still one of the busiest manufacturing centres of Russia. It is, too, one of Russia's chief ports, though it is handicapped by the freezing of the Gulf of Finland, to which it is connected by a ship canal.

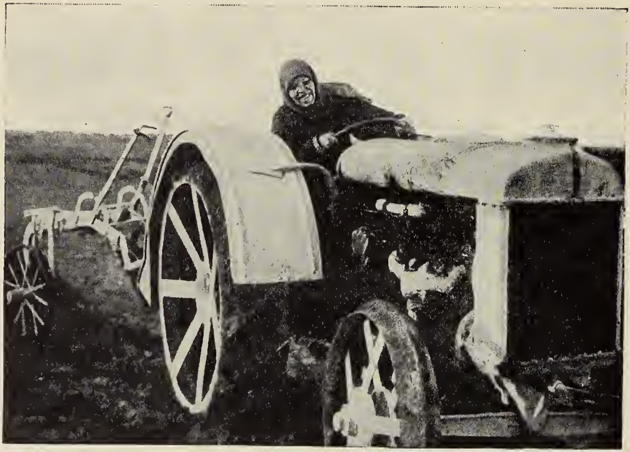


(*E. N. A.*)

FIG. 40.—PLOUGHING IN RUSSIA—OLD STYLE

In south-eastern Russia the rainfall is not sufficient to promote the growth of forest, and in its natural condition the region consisted of *grassland and steppe*. The richest part is that which is covered by the deep, fertile soil known as the "*Black Earth*" (see fig. 39). This is one of the best wheat-growing districts in the world, and large quantities of wheat were formerly exported to Britain.

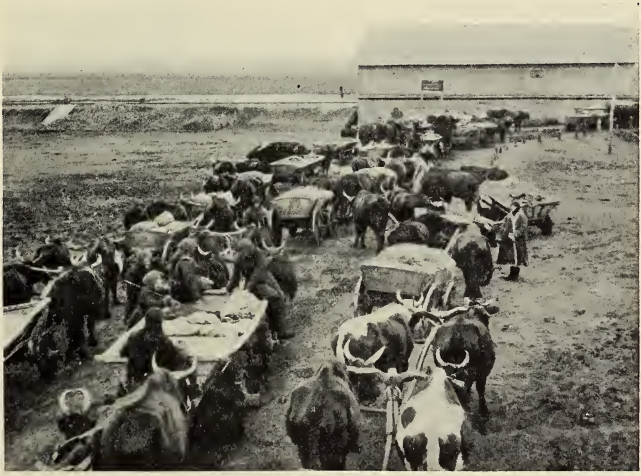
Less than a century ago the peasants of this region, as indeed of every part of Russia, were serfs who were compelled to work for very low wages on the estates of the great landowners. In 1861 the serfs were liberated and each man was allowed to purchase land. These peasant-owned farms were only small to begin with, and as each man at his death had to divide his land equally among his children, individual holdings soon became very small indeed. Many of the farms are not only too small to provide for the needs of a family, but are also divided up into several widely scattered strips of land, so that much time is wasted in going from one to another. Consequently the peasants remain desperately poor. They live crowded together in poor little one-roomed wooden houses, ranged on each side of an unpaved street, which becomes a sea of mud after rain or thaw. A Russian writer thus describes the village in which he lived as a boy :



(*E. N. A.*)

FIG. 41.—PLOUGHING IN RUSSIA—NEW STYLE

"There were the humpy barns with umbrella-like roofs of straw; stumpy log huts with their arrow-shaped straw roofs overgrown in places with thick moss; brush fences crackling from dryness; towering sweeps over open wells, the butt end of the cross-poles weighted down with stones and resting on the ground like dogs on their haunches; unpaved streets, with ditches in front of their houses to drain the waters after heavy rains and spring thaws; swells and hollows in the ground, with holes in which the mud never dried out."[1]



(*Soyusfoto*)

FIG. 42.—TRANSPORTING GRAIN FROM A STATE FARM IN SOUTHERN RUSSIA

But great changes are taking place in Russia, for the Soviet Government is making great efforts to apply the principles of communism to farming. One way in which they are doing this is by persuading the peasants to form "collective farms." Under this system the individual peasant no longer works his own bit of land in his old inefficient manner.

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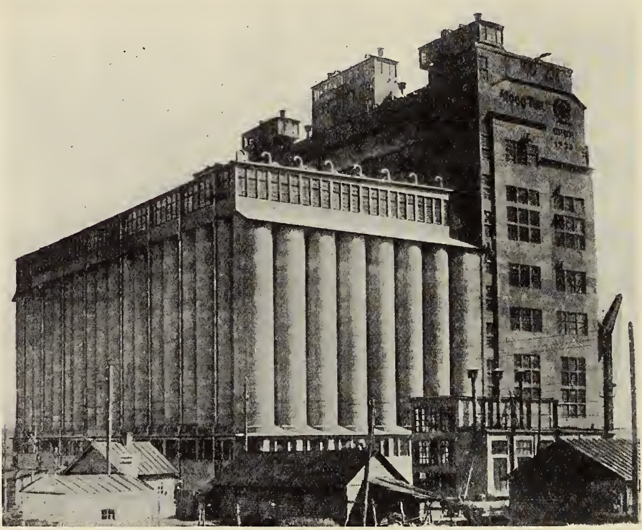
[1] M. Hindus, *Red Bread.*



(Soyusfoto

FIG. 43.—GIANT GRAIN ELEVATOR AT A RUSSIAN PORT ON THE BLACK SEA

(Said to be the largest grain elevator in Europe, it holds 41,000 tons of wheat, and requires only five men to operate)

Instead, all the land in a given district is made into one large farm, on which the former owners work under the direction of a skilled manager. Fences and boundary ridges are removed, and the land is cultivated by modern agricultural implements drawn by motor tractors. At the end of the year the grain and profits from the working of the farm are divided among the workers.

Another revolutionary farming method adopted by the Soviet Government is the formation of great State farms, one of which, called the Giant, is as large as Oxfordshire. Such State farms are run on the same lines as factories, and are, indeed, sometimes called " grain factories." Ploughing, sowing and reaping are done by the aid of fleets of oil-driven tractors ; the workmen are organised in brigades as in the army ; and, in case of need, the shift system is adopted, work being continued through the night.

Before the Great War the Black Earth district of Russia was one of the granaries of Europe and exported large quantities of wheat from the Black Sea port of **Odessa**. During the war and the Revolution which followed, production declined, and there was practically no surplus for export. The Soviet Government hope, however, that the system of Collective and State farms will again make Russia a great exporter of wheat.

MINING AND MANUFACTURING IN SOUTHERN RUSSIA

South of the Black Earth district are several rich mineral fields. In the basin of the *Donetz River* is Russia's largest coalfield and near by are large deposits of iron ore. This district has, therefore, become the chief centre for the manufacture of iron and steel and machinery.

Beyond the Caucasus, on the western shores of the Caspian Sea, is situated one of the most productive oilfields in the world. **Baku** is the chief centre for the "mining" of the petroleum, which is pumped through pipes to the port of **Batum** on the Black Sea.

EXERCISES

1. Consider the following temperature statistics (° F.) :

—	J.	F.	M.	A.	M.	J.	Jy.	A.	S.	O.	N.	D.
London	39	40	42	47	53	59	63	62	57	49	43	39
Moscow	12	14	23	38	53	61	66	62	52	40	28	17
Astrakhan	19	21	32	49	64	73	78	74	64	50	38	26

Complete the following sentences :

(*a*) In average years London is frost-bound for . . . months, Moscow for . . . months, and Astrakhan for . . . months.

(*b*) The range of temperature (*i.e.* the difference between the warmest and the coolest months) is . . . ° F. in London, . . . ° F. in Moscow, and . . . ° F. in Astrakhan.

(*c*) Britain has an *equable* climate because she is surrounded by the sea ; Russia has an . . . climate, because she is . . .

2. Using the isotherm map in your atlas, draw a simple sketch-map to show that, on the same line of latitude, eastern Siberia has colder winters than western Europe, and that central Siberia has colder winters than either. Give the causes of these facts.

3. Collect newspaper cuttings which describe the efforts Russia is making to increase (*a*) her agricultural production, (*b*) her output of manufactured goods.

4. What advantages has Moscow over Leningrad as the capital of Russia ? What special advantage had Leningrad (St. Petersburg) when Russia had a great deal of trade with western Europe ?

CHAPTER VII

THE SCANDINAVIAN PENINSULA

This peninsula comprises the two countries of Norway and Sweden. If we look only at the outline of the peninsula it may seem strange that it is divided into two countries, and particularly strange that the boundary should run lengthwise so as to make each country long and narrow. But the physical map shows that there is ample reason for this in the broad belt of highland which forms a kind of " backbone " to the peninsula. The Scandinavians picture their land as a boat lying bottom upwards, and the broad belt of highland in the middle is spoken of as the " kiolen," or " keel."

This belt of highland accounts for many of the differences between Norway and Sweden. In the first place, since it lies nearer to the west coast than to the east coast, Norway is a narrower country than Sweden and has no coastal plain. As there is not as much good farming land in Norway as in Sweden, the Norwegians have had to look to the sea for a living to a much greater extent than the Swedes have done.

The coasts themselves are very different too. Norway is characterised by deep, steep-sided *fiords*, which wind so far into the land that if the Norwegian coast were straightened out it would stretch half-way round the world. The fiords provide the best means of getting from one part of the country to another. Indeed, two places at the heads of neighbouring fiords may be only a few miles apart as the crow flies, but the inhabitants often find it easier to go twenty or thirty miles round by sea, than to go directly over the narrow neck of highland. Sea transport is also favoured by the existence of a chain of rocky islands off the Norwegian coast, which act as a breakwater and provide a sheltered channel parallel to the shore. In Sweden, on the contrary, the coast is broken by small indentations only, and though there is no lack of good harbours, the level nature of the ground makes land transport much easier than in Norway.

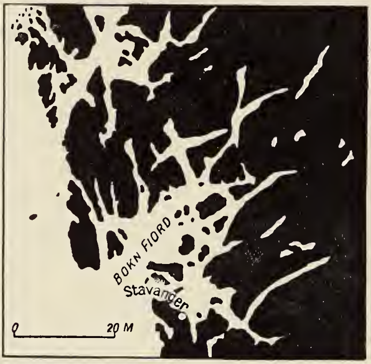


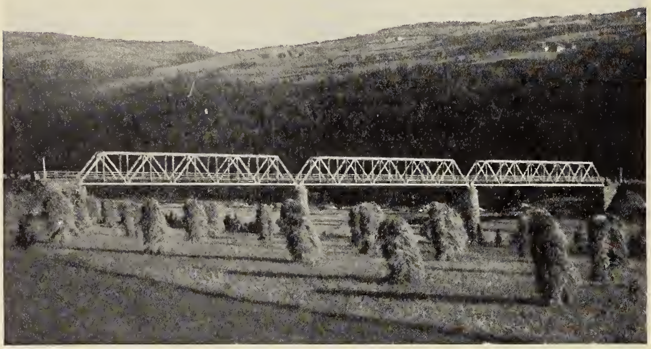
Fig. 44.—PART OF NORWAY'S FIORD COAST

Again, the broad belt of highland causes differences in the climates of Norway and Sweden. It lies directly across the path of the westerly winds from the Atlantic, and as the winds rise to cross the mountains they cool and their moisture condenses to form rain which falls abundantly on the Norwegian side. When the winds reach the Swedish lowlands they have lost much of their moisture, so Sweden has much less rain than Norway. It is, we say, in the "*rain shadow*" of the highlands. The winds from the ocean also keep Norway warm in winter and cool in summer. These winds and the warm Gulf Stream cause the Norwegian coast to have warmer winters than any other part of the world in the same latitude. Its harbours are never frozen, and even the upper ends of the fiords are hardly ever covered with ice, though this may be due more to the warm water from the Gulf Stream than to winds from the ocean. Sweden, however, is shut off from the oceanic influences, so its summers are warmer and its winters colder than those of Norway. In fact, the Gulf of Bothnia is closed by ice for four or five months and regular winter postal services are established over the ice between Finland and Sweden. Even the southern part of the Baltic Sea is so subject to freezing that the harbours can be kept open only by the use of ice-breakers.

HOW THE PEOPLE LIVE

Farming provides a livelihood for a large part of the people in both Norway and Sweden, but here again there are considerable differences between the two countries. In *Norway* the level, fertile ground occurs only in small patches along the edges and at the ends of the fiords ; consequently the farms are small and often scattered. The climate is not sunny enough to ripen wheat, and though rye, oats and potatoes are grown on every farm, the farmer directs his attention chiefly to the rearing of dairy cattle. The mild, moist climate suits the growth of grass, but the frequency of rain even in summer makes haymaking difficult. Were the hay allowed to lie on the ground as in England it would probably never dry, so the Norwegian farmer hangs it up on poles and wire fences in order that it may dry quickly.

But the valley lands cannot produce sufficient food to keep the cattle all the year round ; so the Norwegian farmer takes his beasts up to the mountains as soon as the pastures there are free from snow. These summer pastures may be two or three days' journey from the valley farm, and in some cases the cattle have to be transported across the fiords by boat. They are accompanied by the herd-boys and dairymaids, who stay on the mountains with the cattle for three or four months. During this time they live in rough log-huts, which are known as a "*saeter*." They make butter and cheese from the milk, and gather small crops of hay from any specially productive patches of land.

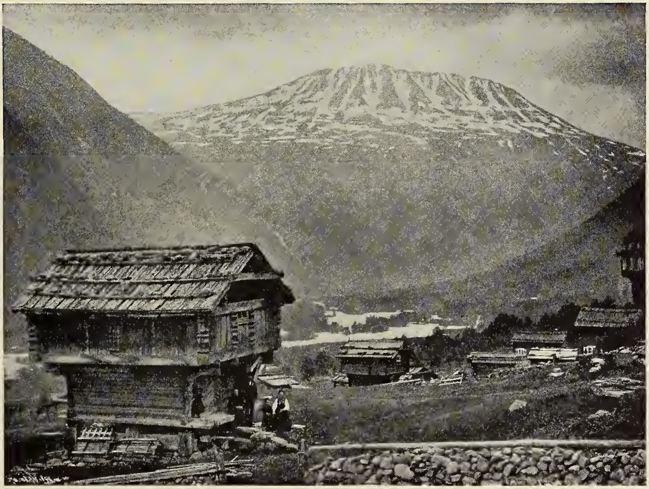


(*Norway Travel Bureau*)

FIG. 45.—DRYING HAY ON POLES

By such careful methods of farming the Norwegians are able to keep relatively large numbers of cattle. There are indeed nearly half as many cattle as people, so it is not surprising to find that Norway produces more milk than her people require. The surplus is exported, chiefly in condensed and powdered form.

In *Sweden*, conditions are more suitable for farming, especially in the extreme south. Here in the province of Scania (which gave its name to the whole peninsula) are large areas of low, level ground and deep, fertile soil. Wheat and other grain grow so well in this district that it has been termed "the granary of Sweden." Sugar-beet, potatoes and flax are cultivated and large quantities of butter, cheese, bacon and eggs are sent from this district to Britain.



(*Norway Travel Bureau*)

FIG. 46.—A NORWEGIAN SAETER

In other parts of Sweden, however, the land is not so fertile, and farming is very similar to that of Norway, except that the cattle are not sent up to mountain pastures in summer.

Fishing is much more important in Norway than in Sweden, since the Norwegian seas are ice-free all the year round, and are much richer in fish than the Baltic. The fishing industry provides work for about a quarter of the working people of Norway, but far more than this number are engaged in the industry, since the same man may be both fisherman and farmer. The chief fish caught are cod, herring and brisling. Cod-fishing begins early in the year, off the Lofoten Isles, and is continued until June, by which time the fleets are to be found off the North Cape. The chief cod-fishing centres are Tromso and Hammerfest. During a good season as many as sixty million codfish are landed. Most of these are salted or sun-dried for export, chiefly to Mediterranean countries and to South America. Oil is extracted from the livers and the residue is dried and powdered to form fish-meal and fertilisers. In some parts of Norway dried cods' heads are used as cattle food.

Herrings are caught in the more southerly seas, off Trondhjem, Bergen and Stavanger. As the Norwegian herring season is earlier than ours, we import considerable quantities of fresh herrings from that country ; but most of the catch is salted for export to Russia, Poland and Germany.

Brisling and sild, which are similar to sardines, are caught chiefly in the Oslo Fiord. Stavanger is the largest canning centre.

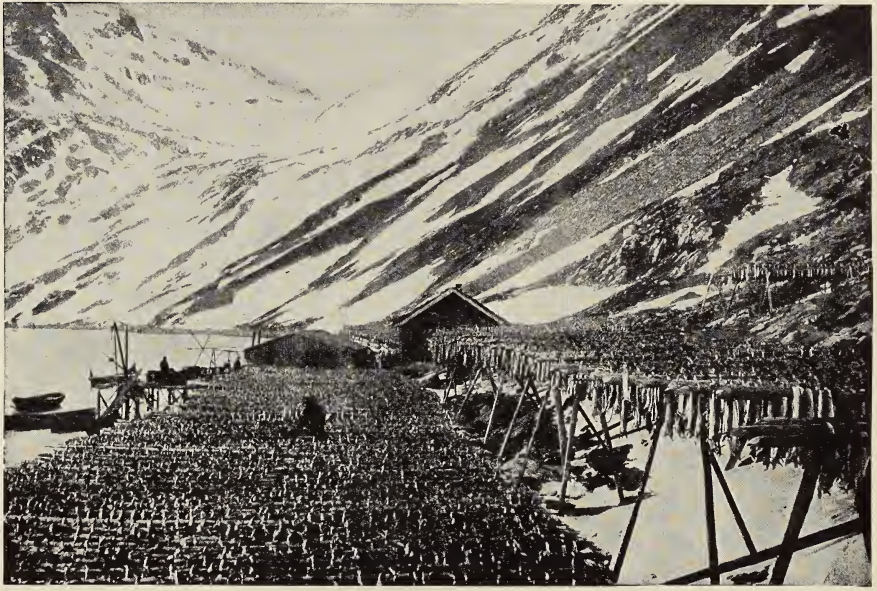
Lumbering.—A large part of the surface of both countries is covered with coniferous forests. These forests provide work for considerable numbers of men, and timber and timber products form a large proportion of the exports.

Norway has only one-third as much forest land as Sweden, but the timber industry provides work for about a quarter of the working population. For several months in winter time the men leave the farms to the care of the women and children, and go out into the forests to cut timber. The logs are dragged by ponies to the rivers, down which they are floated when the spring snows cause floods.

Sweden produces about a quarter of Europe's timber, and a quarter of the world's wood-pulp. Lumbering is carried on in the same way as in Norway, but there is a much greater development of the manufacturing side of the industry. Hydro-electricity is generated by the rapid streams, and used to run saw-mills and pulp-mills. The timber is exported as pit-props, planks and cheap furniture, and the pulp is exported to countries which make paper and artificial silk.

Mining and Manufacturing.—Both Norway and Sweden are handicapped as manufacturing countries by lack of coalfields. They have, however, large supplies of electricity, which is generated from the rapid rivers and used in the homes, on the farms and in factories. In *Norway* the chief industries, in addition to the timber industries and fish curing and packing, are those in which electricity can be used to the greatest advantage. Fertilisers are made by combining the nitrogen of the air with other substances. Aluminium is smelted, small quantities of high quality steel are manufactured, and there are some textile factories. One great advantage of the use of electricity in manufacture is that the factories need not be concentrated in smoky towns, but can be scattered over the countryside, and the factory workers can continue to live in the family farmhouse.

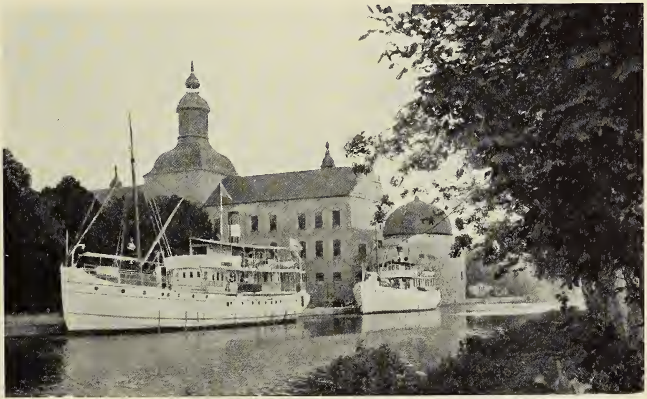
Sweden possesses even larger resources of hydro-electricity than Norway, and has also the advantage of rich deposits of iron ore. Her two iron mining districts are those of **Dannemora** in central Sweden and **Gellivare** in Lapland. The ore in the former district is of very high quality, and most of it is used within the country for the manufacture of high-grade cutting tools, machines, ball bearings, etc. Nearly all the Gellivare ore is exported. In summer a good deal of it is sent via the Baltic port of **Lulea** ; in winter, however, this port is closed by ice, so an electric railway has been built northward to the ice-free Norwegian port of **Narvik.**



(*E. N. A.*)

FIG. 47.—COD-DRYING IN NORWAY

Sweden is noteworthy for many special industries which owe their origin to Swedish inventors. The match industry, in which Sweden leads the world, was based on Swedish inventions of safety matches and of match-making machines. Cream separators, primus stoves, lighthouse lamps and smokeless powder are other specialities which are manufactured in Sweden because they were invented there.



(Swedish Travel Bureau)

FIG. 48.—THE GOTA CANAL

Foreign Trade : *Norway.*—The Norwegians have always had a great difficulty in obtaining a livelihood in their own mountainous country. In olden times bands of Vikings sailed from Scandinavian harbours to raid and plunder richer lands across the sea. In modern times their descendants sail the seas to earn money to keep themselves and their dependants. In proportion to her population Norway possesses the largest merchant fleet in the world and most of her ships are " tramp " steamers—so called, not because they are broken-down old vessels, for most of them are very well equipped, but because they " tramp " the sea from port to port picking up cargo where they can, " carrying anything, anywhere, for anybody."

But the same ruggedness of the land which drives the Norwegians to seek a living overseas is a great attraction to tourists. Every summer thousands of people visit Norway in order to enjoy the magnificent scenery of the fiords and the unusual spectacle of the " midnight sun."

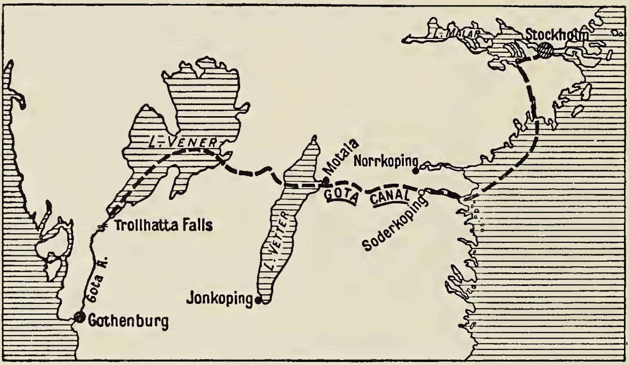


Fig. 49.—SWEDEN'S LAKE-BELT AND THE GOTA CANAL

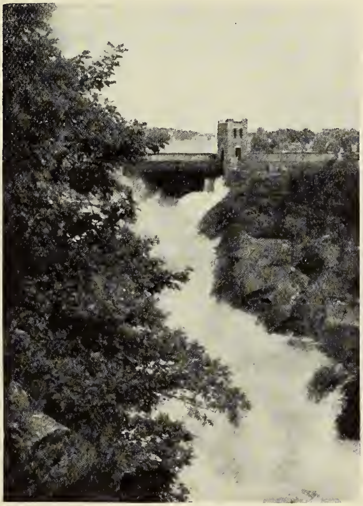
These tourists spend much money in Norway ; so although " scenic beauty " does not appear in the list of exports, it serves the same purpose as exports, by providing a source of income for the Norwegian people.

The chief commodities Norway sells to other countries are timber, wood-pulp and fish ; the chief commodities she imports are wheat, machinery, clothing and cotton goods. But every year she spends about twenty million pounds more on imports than she receives for exports. How can she keep on doing this ? (The two preceding paragraphs provide the clue.)

Sweden, with her more fertile soil and greater supplies of timber and metals, has more goods to sell than Norway, but does not earn as much money by her shipping. Her chief exports are timber, wood-pulp, paper and metal goods, while her imports are similar to those of Norway.

THE TOWNS OF NORWAY AND SWEDEN

Oslo, formerly called Christiania, is the capital of Norway. It is situated at the head of the Oslo Fiord, in the centre of the only large area of fertile lowland, and near the Glommen river, which forms the only easy way across the country. **Trondhjem,** is situated on a fine fiord harbour at the northern end of the trough which leads across the highland to Oslo. It was formerly the capital of the country. The name

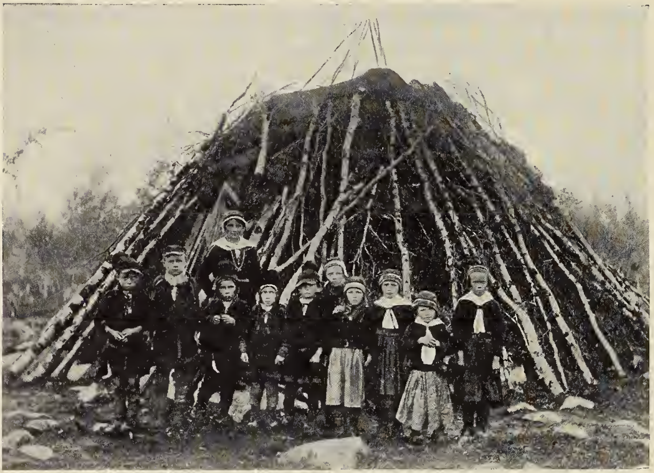


(*Swedish Travel Bureau*)

FIG. 50.—TROLLHATTA FALLS

means "throne-home," and Norwegian kings are still crowned in its cathedral. **Bergen,** situated midway between Trondhjem and Oslo, is an important fishing station and exports much timber.

Stockholm, the capital of Sweden, is built on a number of islands situated in the channel which connects Lake Malar with the sea. The Vikings had one of their chief fortresses here, and the city grew up around it. Even to-day the city is intersected by so many waterways that it is sometimes called "The Venice of the North." **Gothenburg,** the greatest port of Sweden, is situated at the mouth of the Gota river. From it railways radiate to all parts of Sweden, and the *Gota Canal*, which follows the course of the Gota river and then crosses Lakes Wener, Wetter, and Malar, provides an alternative route to Stockholm. The *Trollhatta Falls* on the Gota river have been harnessed for the generation of



(*Swedish Travel Bureau*)

FIG. 51.—A LAPP SCHOOL

hydro-electricity. More electricity is produced there than is needed in the district, so the surplus is "exported" by cables to Denmark. **Malmo,** situated at the extreme southern end of the peninsula, is an important packet station and exports much dairy produce.

THE LAPPS

These interesting people inhabit the northern part of Sweden and the adjoining districts of Norway. They are of small stature, and have rather flat noses and prominent cheek-bones. The adults have very dark complexions, but this may be due to their dislike of washing ; it is said, indeed, that a Lapp can effectively disguise himself by washing his face.

Some of the Lapps earn a living by fishing or by cattle-rearing ; but the most interesting tribes are the *Nomad Lapps.* They depend almost entirely on reindeer, which provide them with milk, meat, clothing and means of transport. The chief food of the reindeer is a particular type of moss, which grows only in snowy regions. The animals seem to be able to smell this moss through the snow, for they often dig down several feet in order to get it.

The nomadic life of the Lapps is due to the frequent movements in search of fresh pastures, the reindeer being driven to the snow-covered uplands in summer and to the sheltered valleys in winter. In summer the people live in tents made of poles covered with reindeer skin ; in winter they use huts built of birch branches set close together and covered with turf and stones.

Though these tribes still cling to their nomadic form of life, they are gradually becoming more civilised. Schools are provided for the children at the summer encampments (see fig. 51), and such modern conveniences as doors, windows, clocks, and even sewing machines, may be seen in some of the dwelling huts.

DENMARK

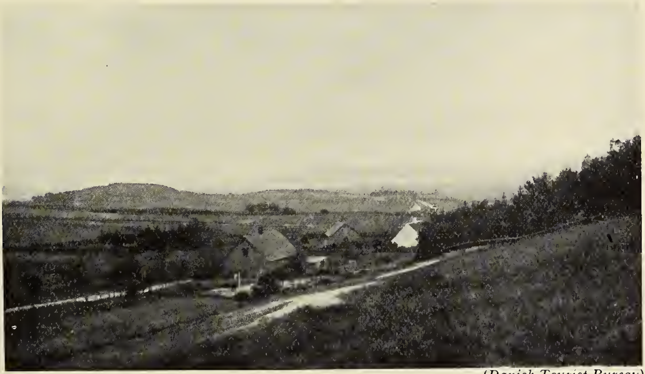
Denmark is a Scandinavian country, for its people are closely related to the Norwegians and Swedes and speak a very similar language. Indeed Norway was for many centuries just a province of Denmark ! Yet the land of the Danes differs very much from the other two countries. It has no high land, no fiords, no forests, no water power, no minerals. Yet it is the richest of the three countries, since it is the best farming country.

When we think of Denmark, we immediately think also of the Danish products we buy in the shops—butter, bacon, cheese, eggs and condensed milk. It is, indeed, on the sale of dairy produce that the people of Denmark depend for a living. They have brought dairy farming to a pitch of perfection hardly equalled anywhere else in the world.

The Danish farms are generally quite small—many cf them indeed being less than eight acres in extent. Yet every farm is divided into small fields, each of which grows a different crop. There are comparatively few fields of permanent pasture, but clover and other grasses are grown as part of the system of rotation of crops. Large quantities of roots and grain are also grown as food for the cattle, and the Danish farmer maintains that in this way he is able to keep more cattle than he could if he had nearly all his land under grass.

The manufacture of dairy produce is almost entirely in the hands of co-operative societies. Motor lorries collect the milk from all the farms in a particular district, and take it to the central dairy where the cream is separated and made into butter by special machinery. Each farmer is paid for the amount of cream he sends and in addition receives back his share of separated milk. This is a valuable food for calves, poultry and pigs; indeed the Danes have a saying that "the pig hangs on the cow's tail."

In addition to the co-operative butter factories, there are societies which specialise in the curing of bacon, or the marketing of eggs, or the purchase of the foodstuffs, seeds, fertilisers and machinery required by the members of the society. The small farmer is thereby saved the trouble and expense of making his own butter, of marketing his own produce, and of buying goods in small quantities. Since the co-operative societies manufacture and buy or sell goods in large quantities they can be run very economically.



(*Danish Tourist Bureau*)

FIG. 52.—DENMARK—COASTAL SCENERY WITH SANDHILLS AND RECLAIMED LAND

The eastern half of Denmark, which includes the islands of Zealand, Funen and Laaland, is composed of very fertile soil, and in this region the scenery is very much like that of rural England—except that there are far more small farmhouses, indicating that there are more people per square mile than in most English farming districts. The western and northern parts of the peninsula of Jutland are largely covered with sandy soil, which in its natural state was infertile. But the Danes have dug drainage ditches and irrigation canals, and so improved the sandy soil by the addition of clay and artificial manures that most of it has been transformed into productive farm land.

Although dairying is the basis of Denmark's prosperity less than half her people are engaged in farming. Large numbers are engaged in the preparation and sale of dairy produce, and in the importation and distribution of foodstuffs and manufactured goods. There are also many factories manufacturing such things as margarine and sugar beet. Fishing, too, is an important industry, the Danish fishing fleet numbering some 15,000 boats. The Lymn Fiord (not really a fiord but a very shallow gulf) is specially noteworthy as a nursery for plaice, which are kept in floating wicker-work cages until they are fully grown.

Denmark has few large towns ; in fact, with the exception of Copenhagen, the capital, there is no city with a population of more than 76,000 and only three with more than 40,000.

Copenhagen (730,000) is the largest city of Scandinavia, and contains more than one-fifth of all the people in Denmark. It owes its importance to its situation on the Sound, through which pass nearly all the vessels entering or leaving the Baltic. It conducts the greater part of Denmark's foreign trade and also distributes and collects goods to and from all parts of the Baltic.

Esbjerg is a new port on the west coast, which is specially concerned with the export of dairy produce to Britain. It is also the chief fishing port of Denmark.

EXERCISES

1. Draw a sketch-map showing three routes by which you might travel to Stockholm :

- (*a*) Partly by sea and partly by canal.
- (*b*) Mainly by sea, but the last part of the journey by train-ferry.
- (*c*) Almost entirely by land.

2. " The three chief cities of Norway and the three chief cities of Sweden are situated at the corners of similar triangles." Draw a sketch-map to illustrate this statement.

3. Draw simple sketch-maps to show that :

- (*a*) The Norwegian coast is warmer than the Swedish coast in winter.
- (*b*) Norway has more rain than Sweden.

Give the causes of these facts.

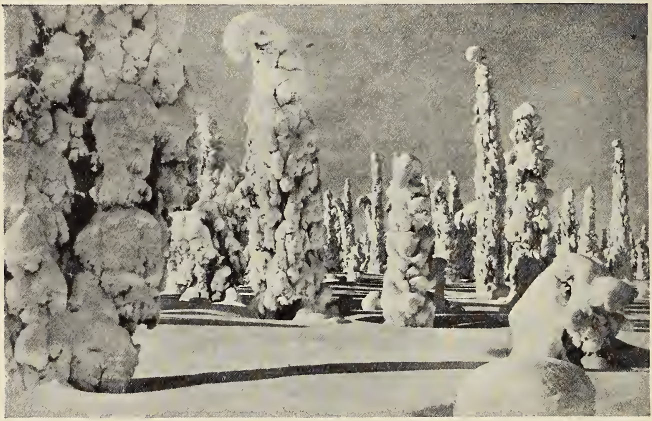
4. For every 1,000 people Norway has the equivalent of a 1,200-ton steamer, and Sweden the equivalent of a 230-ton steamer.

What reasons can you give for this great difference ?

CHAPTER VIII

FOUR YOUNG REPUBLICS

On the eastern side of the Baltic are four little Republics—Finland, Estonia, Latvia and Lithuania—which, before and during the Great War, were part of the Russian Empire.



(*Finnish Legation*)

Fig. 53.—winter landscape in finland

A good deal of the surface of each of these countries is covered with forests, and timber plays a much more important part in the lives of the people than it does in ours. Except in the towns, practically all the houses are built of logs, even the roof being made of wooden shingles. Wood is also the chief fuel, and one of the most necessary tasks of the peasant is to ensure a sufficient supply of firewood for the winter. Timber also represents one of the chief sources of wealth, and is exported in large quantities as planks, or in the form of wood-pulp.

The primary occupation of the people, however, is farming. Nearly all the farm land is divided into small holdings which are owned by the peasants themselves and from which they produce most of the food and clothing they require. One great difficulty the Baltic farmer has to face is the length and severity of the winters. For five or six months the ground is frozen hard and covered with snow, so that all farm work has to be crowded into the summer months. In many districts the school children have " holidays " from May to September—in order that they may work on the farms. Often the whole family will be

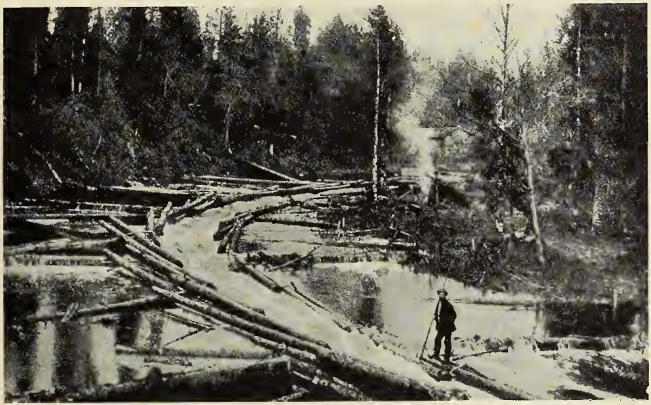

(Finnish Consulate)

FIG. 54.—FLOATING LOGS IN FINLAND

at work in the fields from four o'clock in the morning to eight or nine o'clock at night. In winter the women spend a good deal of time spinning flax and weaving linen cloth, while the men look after the farm animals, thresh the corn, and make various articles required on the farm, as well as the wooden clogs which are worn by all the country people.

FINLAND is the most northerly country of Europe, for although it does not stretch quite so far north as Norway, it is the only European country which lies entirely north of 60° N. latitude. Though it is in roughly the same latitude as Iceland, Greenland and Alaska, it is not by any means a land of perpetual cold ; for though its winters are long and severe, its summers are warmer and sunnier than our own. It has, too, one strip of coast which is never ice-bound ; strange as it may seem, this is not its southern coast, for that is ice-bound for four months ; it is the little bit of Arctic coast where Finland is pinched in between Russia and

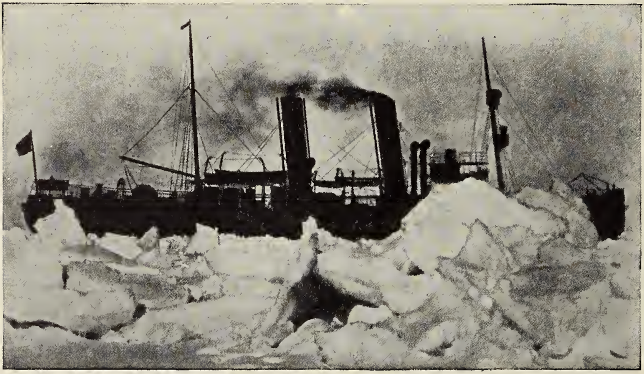

(*E. N. A.*)

FIG. 55.—ICE-BREAKER AT WORK IN THE GULF OF FINLAND

Norway. This coast is always free from ice, and may one day become the chief commercial outlet of the country.

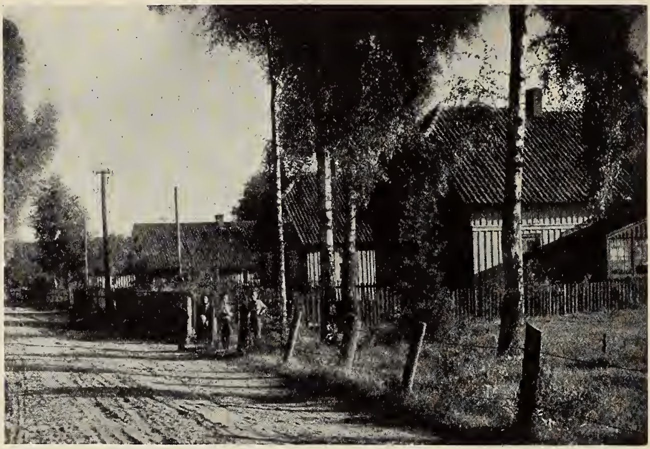
Nearly two-thirds of the surface of Finland is covered with coniferous forests, and timber is the chief asset of the country. Lumbering is conducted in much the same way as in Sweden, and hydro-electricity derived from the many rapid streams is used to operate numerous saw-mills, pulp-mills and paper factories.

(*E. N. A.*)

FIG. 56.—A SUMMER SCENE IN ESTONIA

The timber industries provide nearly three-quarters of the exports, but most of the people are farmers, and even the lumbermen work on their farms in summer. The only large area of fertile land is in the extreme south of the country, but even here wheat does not ripen well, so the chief crops are hay, rye, barley, oats and potatoes. Most of the farms are small, and dairy-farming is conducted on co-operative lines as in Denmark.

As in Norway and Sweden the abundance of hydro-electric power has led to the development of manufactures. **Tammerfors** (Tampere) is sometimes called the "Manchester of Finland," since it is the chief textile centre. It is situated where a rapid stream emerges from a lake and provides a plentiful supply of "white coal," as hydro-electric power is sometimes called.



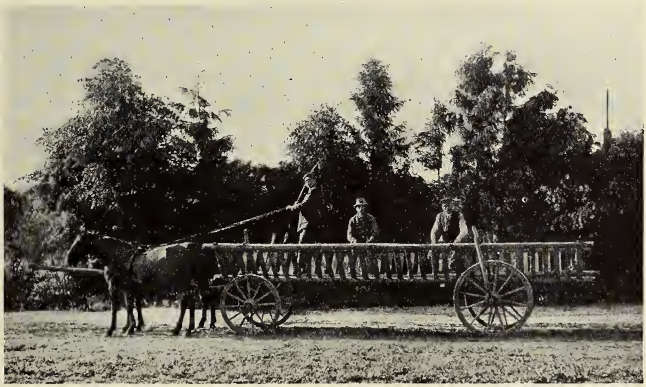
(*Lithuanian Legation*)

FIG. 57.—VILLAGE STREET IN LITHUANIA

Helsingfors (Helsinki), the capital and chief port of the country, is situated on a fine harbour which is protected by a group of islands.

ESTONIA, which lies to the south of the Gulf of Finland, is inhabited by a people who are akin to the Finns, and who speak a very similar language. The northern half of the country is swampy and infertile, but the southern half has much rich arable land. Timber, dairy produce and flax are the chief exports, and are sent out from the port-capital, **Revel** (*cf.* Helsingfors).

Narva, situated near a waterfall north of Lake Peipus, may be compared with Tammerfors in Finland, since it has large textile factories which are run by hydro-electricity generated at the falls.



(*Lithuanian Legation*)

FIG. 58.—FARM CART IN LITHUANIA

LATVIA is in many ways similar to Estonia, but the people belong to a different race, and both farming and manufacturing are more highly developed. **Riga,** the capital of the country, is one of the chief ports of the Baltic. Its trade is much larger than the size and population of the country would account for, the reason being that much of Russia's foreign trade still passes through the port. **Libau** and **Windau** are other ports, which are practically ice-free since they are situated on the open Baltic shore, while Riga is often ice-bound for several weeks.

LITHUANIA, as might be expected from its more southerly situation, has much more good farmland than its sister republics. Practically half its total area is ploughed land, another quarter is meadow land, and only one-sixth is forested. The mode of life of the people is, however, very similar to that in the other republics. In addition to rye, oats, barley, potatoes and flax, which are the chief crops of all the Baltic countries, considerable quantities of wheat and sugar-beet are also grown.

The Lithuanian coast is the world's chief source of the fossilised gum known as amber.

Kovno is the capital of Lithuania, and **Memel** (Klaipeda) is its chief port.

EXERCISES

1. Draw a sketch-map showing the four republics mentioned in this chapter. On it mark the chief towns, and beside each town write a short note saying why it is important.
2. How much farther north is Hammerfest than Riga? Why is Riga ice-bound in winter, whilst Hammerfest is ice-free?
3. Latvia has friendly trade agreements with Russia. Can you see any geographical reasons why these have been entered into?

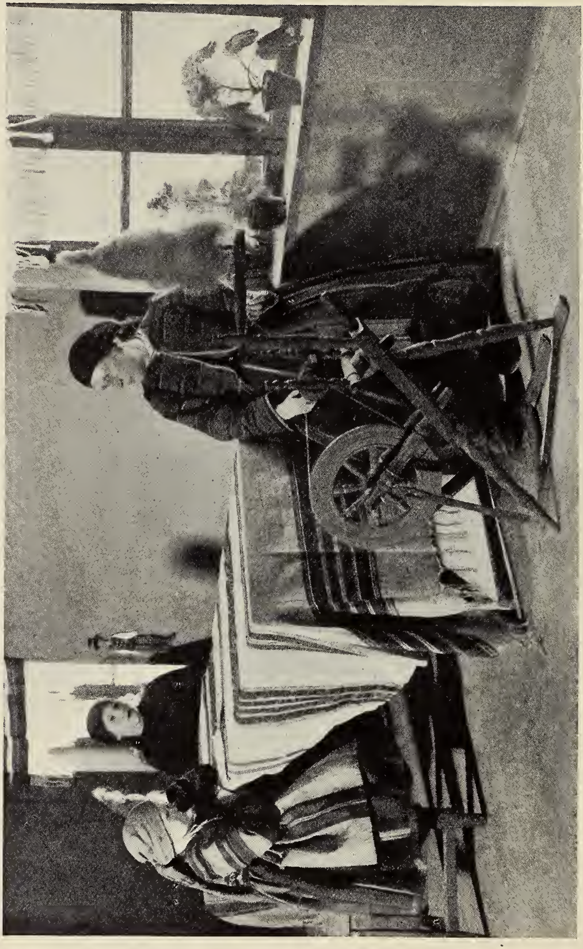
CHAPTER IX

POLAND

Centuries ago Poland was one of the most powerful countries in Europe. Then it fell on evil days and was divided up between the three great countries of Germany, Russia and Austria. After the Great War the Polish lands were again united to form the present republic.

Poland is in many respects the "half-way house" of Europe. It is situated about midway between the west coast and the Urals. Its climate is intermediate between the equable West European type and the very extreme Russian type. Its people belong to the same race as the Russians, but look to western Europe for guidance. Again, the western half of the country, which was formerly under German rule, is much more productive and more efficiently farmed than the eastern half, which was formerly part of Russia.

In Poland, as in Russia, most of the people are peasant farmers, and until recently many of the small farms were composed of scattered strips, just as in southern Russia. The Government is remedying this, not by persuading or compelling the people to join "collective" farms as in Russia, but by re-distributing the land so that each peasant can have all his land together. A great deal has been done, too, to help the people to produce more from a given area of ground. Good quality seeds have been distributed, the people have been shown the advantage of the use of artificial manures, and modern agricultural machinery is gradually being introduced. Even so, the standard of farming remains

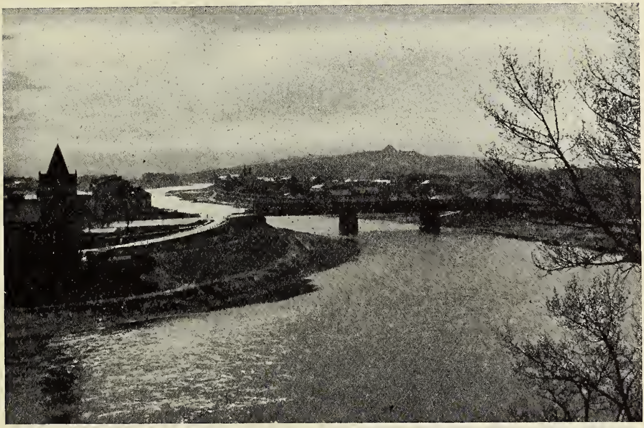


(*Polish Embassy*)

FIG. 59.—POLISH PEASANT SPINNING FLAX

much lower than in western Europe. For example, the yield of wheat per acre is only half that of England.

Since most of the soil is sandy, the chief crop is *rye*, and black rye bread is the chief food of the people. The total quantity of food grains produced in the country is just about sufficient for the needs of the people, and in addition large quantities of brewing barley are exported. The two crops on which Polish farmers depend mainly for a money income are *potatoes* and *sugar-beet.* Enough potatoes are grown in the country to provide each person with one ton per year! There is, therefore, a large surplus, and this is used for the manufacture of alcohol, starch, potato flakes for cattle food, and potato syrup which is used as a substitute for sugar. Poland is also one of the world's chief producers of sugar. Every year enough sugar is produced



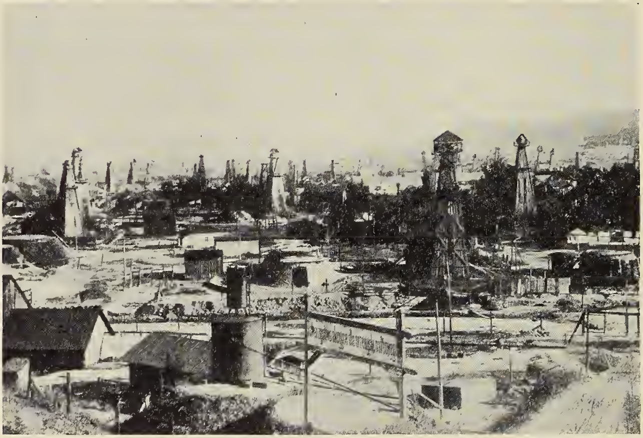
(*Polish Embassy*)

FIG. 60.—THE RIVER VISTULA AT CRACOW

to provide each person with one pound per week ; and as the consumption averages only half a pound per person per week there is a large surplus for export.

PHYSICAL DIVISIONS

Nearly the whole of Poland is included within the basin of the Vistula, and if we could sail down the river from the source to the sea we should pass through all the types of land which comprise the country, viz. :



(*Polish Embassy*)

FIG. 61.—OILFIELD IN GALICIA (POLAND)

(1) **The Carpathians.**—The slopes of these mountains are largely covered with coniferous forests, and lumbering is one of the principal occupations. The logs are tied together to form huge jointed rafts, which are floated down to the port of Danzig. As the voyage takes several weeks, huts are erected on the rafts for the accommodation of the steersmen.

(2) **The Plateau** which lies to the north of the Carpathians is the richest farming district of Poland, and has also large supplies of minerals. In the Moravian Gate, which lies between the Carpathians and Bohemia, is the *Upper Silesian Coalfield,* most of which belongs to Poland. Iron and zinc are found near by, and petroleum, salt and potash are mined farther east between Cracow and Lemberg.

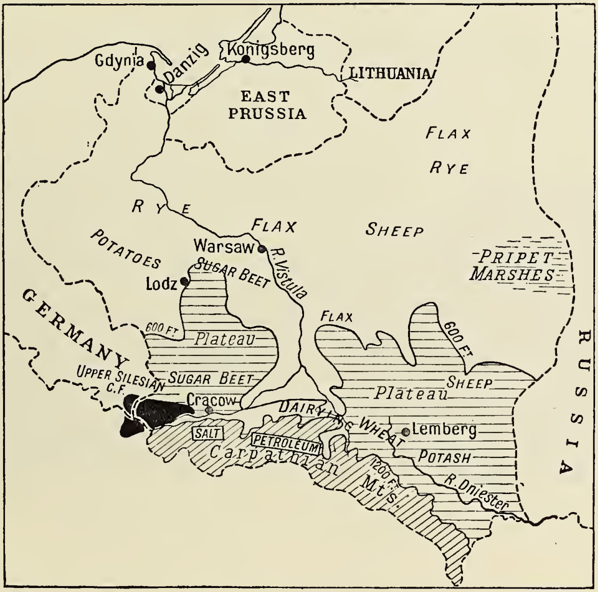
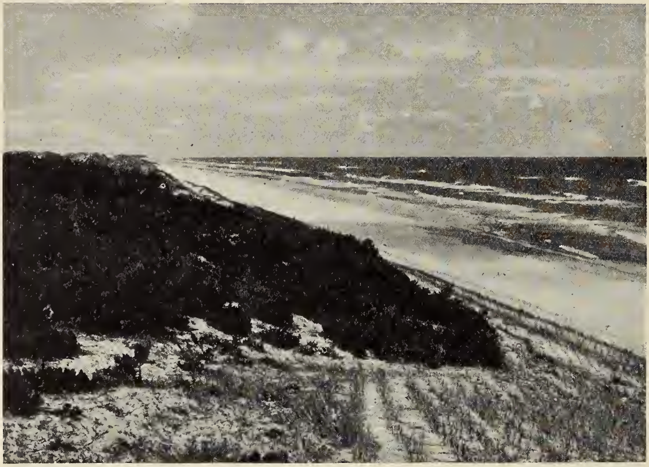


Fig. 62.—POLAND: PHYSICAL MAP AND CHIEF PRODUCTS

(3) **The Northern Plain** is crossed by broad shallow valleys running roughly from east to west. These valleys are followed by tributaries of the Vistula, which link Poland with Germany and Russia. Unfortunately, large parts of

these valleys are so marshy that they are of little use for agriculture and hinder travel in a north to south direction.

Warsaw, the capital of Poland, is situated where a slight ridge on the left bank of the Vistula narrows the channel and so provides a good crossing-place. The city grew up round a fortress which was built to protect this crossing. In modern times it has become the centre of the road and railway system of Poland, and is one of its chief manufacturing cities. **Lodz,** situated some eighty miles south-west of Warsaw, is the greatest industrial centre in the country, and has many cotton, woollen and silk mills, iron foundries, machine shops, flour mills, boot and shoe factories, etc.



(Polish Embassy)

FIG. 63.—SAND DUNES ON THE BALTIC COAST, "ANCHORED" BY PLANTING GRASS AND TREES

(4) **The Polish Corridor.**—This is a narrow strip of country which separates East Prussia from the rest of Germany. It was given to Poland by the Peace Treaty, in order that

she might have access to the Baltic. Germany, of course, does not like the arrangement, as it is a great hindrance to the movement of people and goods between the two parts of the country.

Danzig is situated at the mouth of the Vistula, which is a great highway for Polish traffic. Consequently, Poland wished the city to be included within her borders at the peace settlement following the Great War. But the majority of the population of the city is German, so it was decided neither to give the city to Poland nor to allow it to be retained by Germany. Instead it was made a Free City and given self-government under the protection of the League of Nations. Though Poland has a large share in the control of the traffic of the port, she has recently built a new port, **Gdynia,** on her own sea-coast some thirty miles away from Danzig. This new port is quickly attracting much of the trade which was formerly conducted by Danzig.

EXERCISES

1. Trace from your atlas the boundaries of Poland and the course of the river Vistula. Now put a dot at the source of each tributary of the Vistula. A line passing through all these points and through the source of the main river will be the *watershed,* and the area enclosed by the line will be the *basin* of the Vistula.

(*a*) How much of Poland lies within the basin of the Vistula ?

(*b*) What light does this throw on Poland's former claim to have Danzig included within her territory ?

2. If all the animals of Poland were divided equally among the people, every family of seven persons would have 1 horse, 1 pig, and 2 cows.

Why are there so many horses ?

Do you think tractors will be widely used for farm work ?

Will the country be able to produce enough dairy produce for its needs ? Will it have a surplus for export ?

3. Draw a sketch-map showing Warsaw as the centre of the railway system of Poland.

CHAPTER X

THE DANUBE LANDS

If we were to follow the course of the Danube from its source in the Black Forest to its mouth in the Black Sea, we should pass through or between seven countries, and see many different types of scenery and people.

The first part of its course is across the plateau of *Bavaria* in Germany. At **Ratisbon,** where the river turns south-eastward, it is joined by a canal which links it to the River Main, a tributary of the Rhine. This canal is now being enlarged, and it will soon be possible for big barges to sail right across Europe from the North Sea to the Black Sea. The Danube enters Austria below **Passau,** from which city it is navigable by steamers right to its mouth.

Below this point the river flows through four plains, separated from each other by ridges of high land which come close to the river on each side like the jaws of a vice.

The four plains are : the *Austrian Plain* the *Little Hungarian Plain*, the *Great Hungarian Plain* and the *Wallachian Plain* of Rumania. The three points where the " vice-jaws " are situated are *Pressburg* (Bratislava), *Budapest* and the *Iron Gates* (see fig. 64).

The Danube is a great highway of trade for the countries of south-eastern Europe, although navigation is hindered by ice in winter and by low water in summer. There are also several places where rapids or sandbanks present difficulties. It would obviously be unfair to ask the people in whose territory such obstructions occur to remove them at their own expense, in order that all the Danube countries might benefit. Neither would it be good for trade if any nation were allowed to levy a toll on vessels using their stretch of the river. So a committee or " Commission " has been appointed to effect improvements and to see that every country has equal opportunities for using the river. The Danube is, therefore, said to be an " Internationalised " river.

Before the Great War a large part of the Danube basin was included in the great Empire of Austria-Hungary. After the War this Empire fell to pieces ; Austria and Hungary became separate countries, the new Republics of Czechoslovakia and Yugoslavia were set up, and Rumania received a large area of territory which formerly belonged to Hungary.

AUSTRIA

Three-quarters of the surface of this little Republic is occupied by the parallel ranges and valleys of the Eastern Alps. This region is only thinly peopled and contains less than a third of all the inhabitants of Austria. Naturally, nearly all the people in this part of the country live in the valleys, as the mountain slopes produce only timber and summer pasture for sheep and cattle. Most of the valleys run from east to west, and many of them are so deep that their southern sides get no sun at all in the winter ; consequently, nearly all the villages are situated on the northern sides of the valleys.

It will be seen on the map that this part of the country is very narrow. This is due to the fact that the valleys have always made it easy to travel from east to west, while the mountains have hindered communication in a north to south direction. Here and there, however, are deep gaps in the ranges which provide routes from one valley to another.

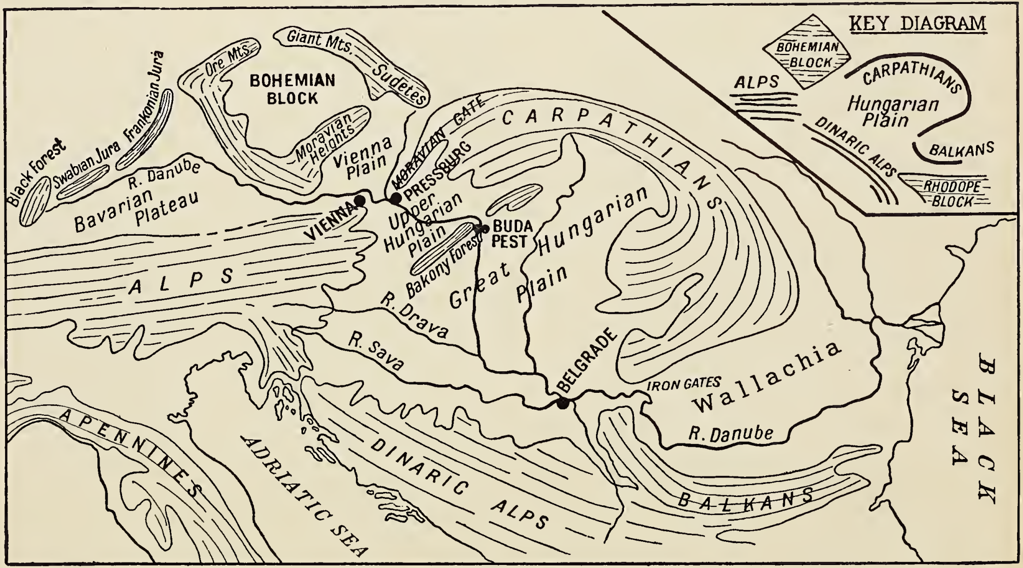


FIG. 64.—THE DANUBE BASIN: SIMPLIFIED PHYSICAL MAP

(The lines within the mountain belts indicate only the general trend of the ranges)

It is opposite such gaps in the mountains that the chief towns, *e.g.* **Innsbruck** and **Salzburg,** have grown up.

The Alps are of service to Austria in five ways. Besides the timber and summer pastures, which have already been mentioned, they furnish minerals such as lead, silver, salt and coal; the rapid streams provide abundant hydro-electric power; and the beautiful scenery attracts great numbers of tourists who bring much money into the country.

The Vienna Plain occupies only one-tenth of the surface of the country but contains two-thirds of the people. **Vienna** itself contains nearly two million people, or almost one-third of the total population of the country. Its large population is due to the fact that it was formerly the capital of a great empire. Now that it is a big city in a little country her people find it very difficult to make a living, and Austria has more than once had to be helped out of her difficulties by the League of Nations.

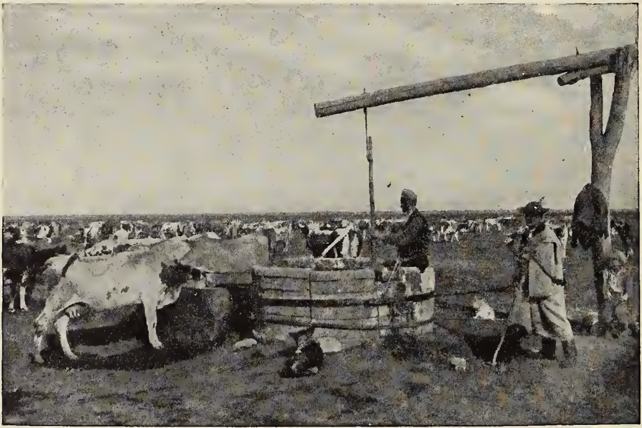
Vienna is sometimes said to be the "key to Europe"; since the possession of it enabled ambitious monarchs to unlock "gates" leading to various parts of Europe. These "gates," which make Vienna one of the greatest railway centres of Europe, are: (1) the *Moravian Gate* between the Carpathians and Bohemia; (2) the *Danube Gate* between the Alps and Bohemia; (3) the *Pressburg Gate* between the Alps and the Carpathians. In addition to these there are ways across the Moravian hills from Prague, along the Alpine valleys from western Europe, and around the south-eastern end of the Alps from the Adriatic Sea.

HUNGARY

Nearly the whole of Hungary consists of fertile plains, drained by the Danube and its tributary, the Theiss.

In their natural condition these plains were temperate grasslands like the steppes of south-eastern Russia. The

Magyars, whose descendants still form nearly the whole population of Hungary, are descended from nomadic herdsmen who came from central Asia in the ninth century. Even yet, parts of the *puztas*, as the Hungarian grass lands are called, are used only for pasturing herds of cattle and horses and flocks of sheep, which are tended by semi-nomadic "cowboys" and shepherds.



(*E. N. A.*)

Fig. 65.—WATERING CATTLE ON THE PUZTAS

This primitive type of life is found, however, only in the remote and less fertile districts. The soil and climate of Hungary are almost ideal for the cultivation of wheat and maize, and in summer the plain seems one vast expanse of golden grain, broken only by occasional patches of potatoes, sunflowers or sugar-beet, and by the fruit trees which cluster round every village. As these open plains were formerly subject to frequent raids by robbers and nomads, the farmers found it advisable to dwell together for protection.

Even to-day the great majority of the farming population live in villages, and it is only in the newly developed districts that isolated farmhouses are to be found.

The typical Hungarian village consists of low, whitewashed, mud-walled houses, each standing in its own garden or orchard. The unpaved streets, deep in dust, mud or snow, according to the season, lead to a large open market-place in the centre of the village. The towns, too, conform to this plan, most of them being merely overgrown villages. With the exception of Budapest, Debreczin and Szegedin, none of them has more than one hundred thousand inhabitants.

Budapest is situated where the Danube valley is hemmed in between the Bakony Forest and a spur of the Carpathians. The old town, *Buda*, is situated on the right bank, and grew up round a fortress overlooking the easiest crossing-place of the river. *Pest*, situated on the lower left bank, formerly suffered greatly from floods, due to the blocking of the channel by ice during the spring thaws. Less than a century ago it was almost destroyed by one such flood, after which a strong embankment was constructed and the town rebuilt on modern lines.

Debreczin is the chief centre of the pastoral industry, the surrounding country being the only part of Central Europe where the primitive methods of large-scale ranching still obtain. Four large fairs, at which cattle, sheep and horses are sold, are held there annually.

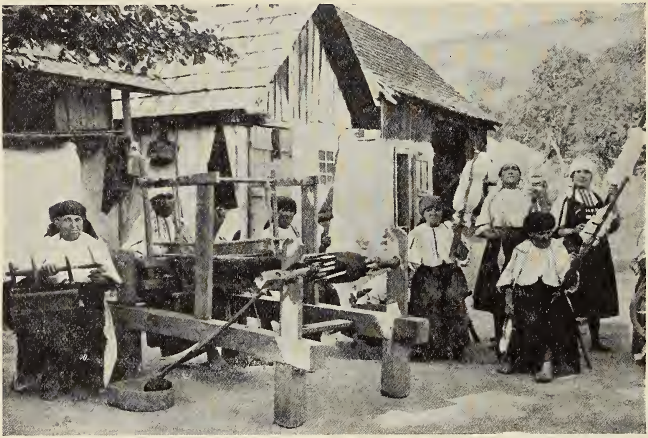
Szegedin, situated on the navigable river Theiss, is the chief wheat market of the plain.

Funfkirchen (Pecs) is the centre of a small coalfield, the only one in Hungary.

RUMANIA

The name "Rumania" means "land of the Romans," and the Rumanian people claim to be partially descended from Roman colonists who settled in this region fifteen hundred years ago. In later centuries the land was under the rule of the Magyars and the Turks, and did not gain independence until 1877. Even then the province of Transylvania remained part of Hungary until the close of the Great War.

Like Hungary, Rumania is predominantly a farming country, and the great majority of the people are peasants who live in small villages. The houses are built of timber or of clay and are nearly always whitewashed on the outside. Usually they contain only two rooms—a storeroom in front, and a combined bedroom and dining-room behind ; but there is often a wide verandah surrounding the house, and on this the family dine and sleep during the hot weather.



(*Rumanian Legation*)

FIG. 66.—WEAVING AND SPINNING IN RUMANIA

The dress of the Rumanian peasant is said to be the most picturesque in Europe. A man's " best suit " consists of a white smock, fastened at the waist with a brightly coloured sash or belt, and white trousers which have to be folded about the legs since they are sometimes two yards long ! The women wear long white dresses, richly decorated with embroidery, and surmounted by gold and silver necklaces which often represent all the wealth of the family. In winter, however, such costumes have to be supplemented by thick coats of lambskin, for Rumania is so far from the sea that in winter it is as cold as Iceland, though in summer it is nearly as hot as the Equator.

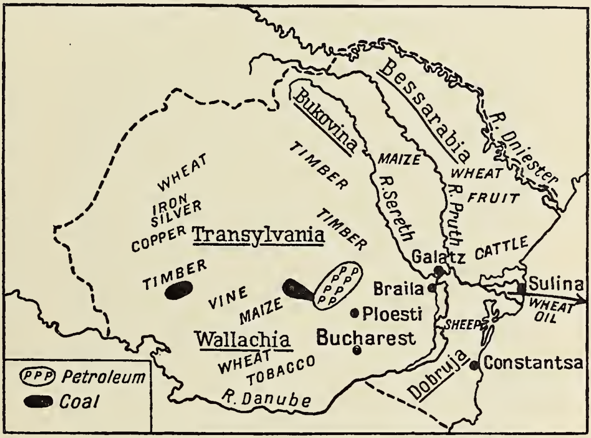
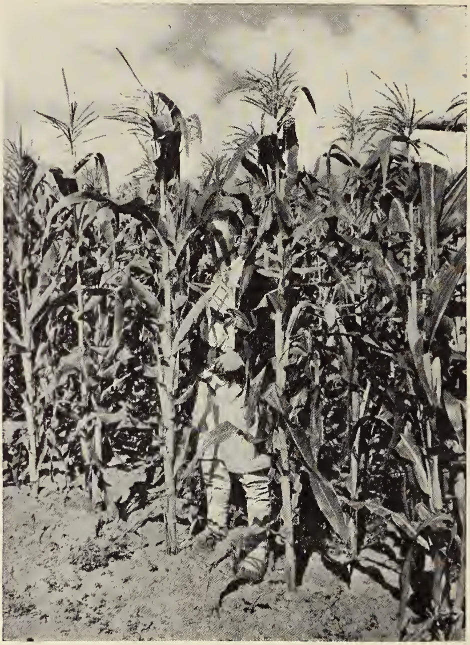


FIG. 67.—RUMANIA : CHIEF PRODUCTS

The great difference between the summer temperatures of northern and southern Europe is shown by the fact that maize forms as large a part of the diet of the Rumanians as rye does of that of the Poles. Though the use of white bread is increasing in Rumania, and there is hardly a village without a bakery, maize porridge, made so thick that it is cut into slices like bread, is still the chief food of the people.

The physical map shows that Rumania consists of three natural divisions, viz. :

(1) **The Carpathians.**—The forests, which cover the mountain sides up to a height of 5,000 feet, provide the country with much timber. Beech-wood, which grows on the lower slopes, is used chiefly for domestic fuel and for railway sleepers. Coniferous timber, which is cut on the higher slopes and floated down such rivers as the Sereth



(*Rumanian Legation*)

Fig. 68.—FIELD OF MAIZE IN RUMANIA

and Pruth, is an important export. Above the forests are grasslands which are used as summer pastures by sheep which spend the winter on the lowlands.

(2) **The Hilly District of Transylvania.**—This is a region of fertile valleys and plateaus where much wheat, maize, wine and fruit are produced. The hills are rich in minerals. Coal, iron, copper, gold, silver and lead are worked, and have given rise to metal-manufacturing industries.

(3) **The Southern and Eastern Plains.**—(*a*) *Wallachia*, which lies between the Transylvanian Alps and the Danube, is one of the best wheat- and maize-growing districts in Europe, and rivals the Hungarian Plain and the Russian Black Earth district in productivity. Near the foot of the mountains, around *Ploesti*, is a large oilfield which supplies Rumania with all the petrol and paraffin she requires, and also provides a considerable surplus for export. **Bucharest,** the capital of Rumania, is situated in the middle of this fertile plain. Near the mouth of the Danube are the two chief ports, **Braila** and **Galatz.** The former is concerned mainly with the export of wheat and the latter with timber.

The map shows that the lower Danube sends off many branches which wind over the countryside, to rejoin the main river many miles farther down. This shows that the land is almost absolutely level, and is therefore subject to floods. In spring this region is covered with many feet of water and great shoals of fish enter the flooded area to lay their eggs. Fishermen then place long nets or traps made of reeds across the channels so as to catch the fish when they return to the river or the sea. Some of these fish-traps are forty miles in length, and in them thirty or forty thousand fish may be caught in a few hours.

(*b*) *Bessarabia*, which lies between the rivers Pruth and Dneister, is another rich grain- and fruit-producing region.

(*c*) *Dobruja*, between the lower Danube and the Black

Sea, is a dry, infertile, limestone district, which is given up mainly to sheep rearing. **Constantsa,** situated opposite the great bend of the Danube, rivals Braila and Galatz as a port. It has the advantage of being ice-free, while the Danube ports are closed by ice for six or seven weeks in the year.

CZECHOSLOVAKIA

This republic is one of the new countries which were formed at the close of the Great War from the Empire of Austria-Hungary.

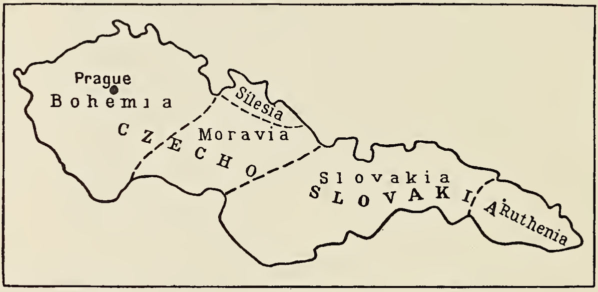


FIG. 69.—THE BOOT-SHAPED COUNTRY OF CZECHOSLOVAKIA
(Showing political divisions)

The country is remarkably like a huntsman's boot in shape. The "leg" of the boot is in the province of *Bohemia*, the "ankle" is *Moravia*, and the "foot" is *Slovakia*, while the turned-down "toe" is the little province of *Ruthenia*. The Czechs are the people who live in Bohemia and Moravia, and the Slovaks are the people of Slovakia.

Bohemia is a plateau, with mountain ranges on the four outer edges, and a sunken lowland in the middle. It is the most fertile and most densely peopled part of the country, and contains most of the mining and manufacturing districts, as well as the capital, Prague.

A very large proportion of the surface of Bohemia is ploughed land on which grass, grain, sugar-beet, hops and potatoes are grown. The land is divided into small holdings, and each field is subdivided into many strips. "As each strip carries a different crop from the one next to it the whole effect is that of a many-coloured striped carpet, spread out over the whole land not only on the level parts but over the hills as well, and tucked down well into the hollows."[1]

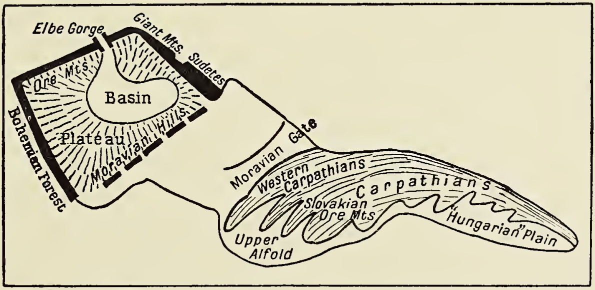


FIG. 70.—DIAGRAM OF CZECHOSLOVAKIA
(Showing physical divisions)

The highlands produce much timber, which is floated down the streams in the form of long rafts, made in many sections so that they can be steered round the bends. Timber is the usual building material except in the large towns.

Bohemia is also rich in minerals. Coal and iron are found near **Pilsen,** which has therefore become the foremost manufacturing city of Czechoslovakia. It is specially noted for "Pilsener" beer, which is brewed from local grown hops, but most of the people are engaged in the manufacture of textiles, glass, metal goods and sugar-beet. The Ore Mountains produce silver, copper, tin, graphite and radium, and near **Carlsbad** are deposits of china clay which have given rise to the porcelain industry of that city.

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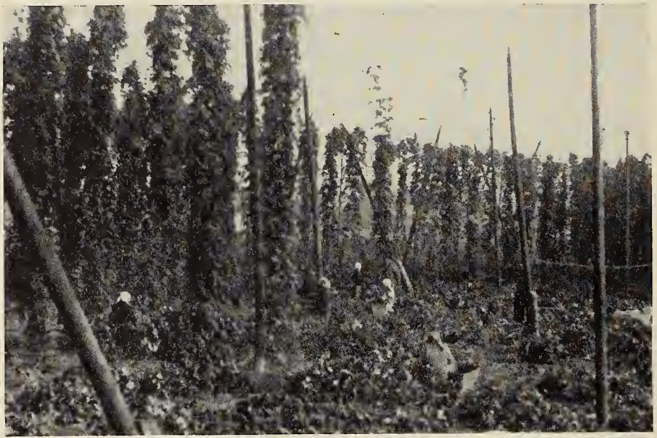
[1] J. Mothersole, *Czechoslovakia.*

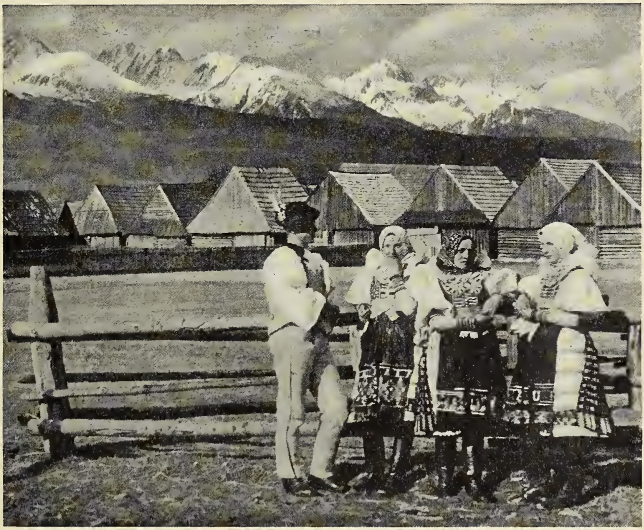
Prague, the capital of Czechoslovakia, is situated almost in the centre of the Bohemian lowlands, on the Moldau tributary of the Elbe. Like many other ancient cities of Europe it grew up round a fortress built on a hill overlooking a convenient crossing-place of the river. The Czech name for the city, *Praha*, means "gateway." An old legend says that it received this name because the queen who founded the city ordered her followers to commence building at a certain point in the forest where they would find men fashioning a doorway.



(Czechoslovakian Legation)

FIG. 71.—HOP-PICKING IN BOHEMIA

Whatever the truth of this story the name is certainly appropriate, since Prague is the centre of the roads and railways of Bohemia, and is therefore the gateway to all parts of the country. One of the chief industries of the city is the manufacture of boots and shoes. As Czechoslovakia manufactures thirty million pairs of boots and shoes every year, while her population is only fifteen millions, she has a large surplus for export.



(*Czechoslovakian Legation*

FIG. 72.—SUNDAY AFTERNOON IN SLOVAKIA

Moravia is the province lying between the Bohemian plateau and the Carpathians. Like Bohemia, it is a productive agricultural region and has several busy manufacturing centres. **Brunn** (Brno), the largest town, is concerned specially with the manufacture of textiles. Near the eastern border of the province is a rich coal-mining area which is an extension of the Silesian coalfield of Poland (see p. 109).

Slovakia and *Ruthenia* differ greatly from the other two provinces. They are largely composed of forested mountains, and the people live in a more primitive manner than do the Czechs. Each village produces nearly everything its inhabitants require. The forests provide fuel and building material, the mountain slopes afford pasturage for cattle and sheep, and the valleys yield crops of oats, wheat, flax and potatoes.

Bratislava (Pressburg) is Czechoslovakia's only port on the Danube.

YUGOSLAVIA

The name of this country was formerly " The Kingdom of the Serbs, Croats and Slovenes." These three peoples belong to the same race as the Czechs and the Slovaks. The Croats and Slovenes were formerly under the rule of Austria and Hungary, but the Serbs have been an independent people for nearly a hundred years. After the Great War the three peoples joined together to make one nation, and the King of Serbia was chosen to be ruler of the new country thus formed.

If we were to walk across Yugoslavia from west to east we should pass through four different types of country, viz. :

(1) *The Dalmatian Coast Land.*—This is composed of innumerable peninsulas and islands separated by narrow straits and long, winding gulfs. These were formed by the land sinking so that the mountain ranges were " half-drowned," and the sea flowed into the valleys. Many of these narrow gulfs form excellent harbours, but most of them are of little use, since it is difficult to construct roads and railways over the mountains to the rich plains of the Danube.

A railway has, however, been constructed to **Ragusa,** which has therefore become an important port.

(2) *The Dinaric Alps*, which rise up steeply from the Adriatic coast, are composed of pure limestone. As this rock is easily dissolved by rain-water the land has become pitted with hollows or " swallow-holes " down which all the surface water rapidly disappears. Consequently, though the Dinaric Alps receive a good deal of rain, they form one of the driest districts in Europe, and one may walk many miles without seeing a stream or a pond or a well. Most of the water which disappears down the swallow-holes never reappears at the surface of the land ; but off the Dalmatian coast are many springs of fresh water bubbling up through the sea. These, no doubt, mark the outlets of the subterranean streams.

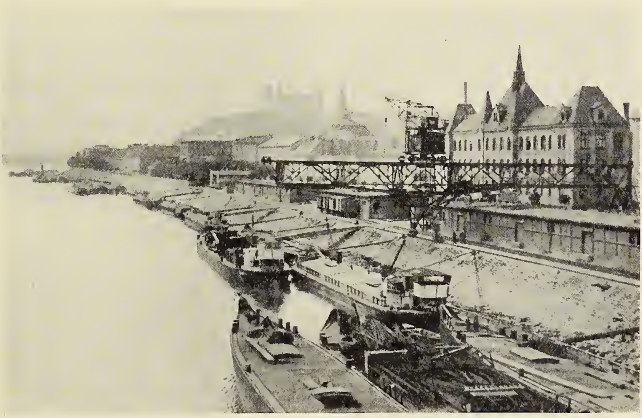


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FIG. 73.—BRATISLAVA

As the limestone of the Dinaric Alps is almost pure calcium carbonate, practically no soil is left when it dissolves. Consequently agriculture is impossible except in scattered hollows where a few inches of soil, representing the residue from many thousands of cubic feet of limestone, have accumulated. Most of the land is a treeless waste, supporting only scanty flocks of sheep and goats.

(3) *The Central and Southern Mountains* are composed, not of limestone, but of rocks which form fertile soils. The mountain slopes are thickly forested, and the valleys are occupied by meadows, cornland and orchards. The peasants are almost self-supporting, *i.e.* they produce on their farms and in their homes nearly all the things they require. The little money they need is obtained by the sale of animals and fruit. Large numbers of live pigs are exported, and a large part of the world's supply of prunes (dried plums) comes from this region.

(4) *The Danube Plains* are, of course, the most productive part of Yugoslavia. Maize is the chief crop and the staple food of the people, but much wheat, sugar-beet, fruit and tobacco are also grown.

Belgrade, the capital of Yugoslavia, is situated at the confluence of the Danube and the Sava. Here, too, the route across the Balkans via the Morava river crosses the Danube. Belgrade is therefore an important route centre, and the "key" to the Balkans. It has consequently become a great trading centre and a fortress town, and was the capital of Serbia before the present kingdom of Yugoslavia was formed. **Nish,** in the centre of Serbia, is situated where the route from Constantinople via the rivers Maritza and Nishava meets the route from Salonica, via the rivers Vardar and Morava.

Zagreb (Agram), in the extreme north-west, is the centre of Croatia, the most progressive province of Yugoslavia.

EXERCISES

1. Austria can produce only half the foodstuffs she requires. Why is this? How do her people earn the money to pay for the food they import?

2. Consider the following table, and state what differences it shows between the various countries :

—	Austria.	Hungary.	Rumania.	Czecho-slovakia.	Yugo-slavia.
Cattle per 1000 people	200	225	260	325	330
Tons of wheat produced per 1000 people	54	335	200	100	235

3. Bohemia has twice as many people as Slovakia. Give reasons for this.

4. "Czechoslovakia has no sea coast, but she is well served by navigable rivers." Draw a sketch-map to illustrate this statement.

5. Rumania's exports are about the same *value* as her imports but are seven times greater by *weight*. Show why this is so.

6. Among Yugoslavia's chief exports are timber, live pigs, wheat and prunes. Draw a sketch-map to show the parts of the country which produce these commodities.

CHAPTER XI

THE BALKAN LANDS AND PEOPLES

THE Balkan countries are Bulgaria, Turkey, Greece and Albania, but to these we must add Serbia and Montenegro, since these parts of Yugoslavia were formerly independent Balkan countries.

A physical map of the Balkan countries seems so intricate that at first sight it is difficult to divide it into clearly marked " natural regions." If, however, fig. 74 is used as a guide, it will be easy to pick out on the atlas the most important physical features of the area. Running through Serbia, Montenegro and Greece are ranges of fold-mountains which project out to sea in the " five-fingered " peninsula of southern Greece. Running from west to east through Bulgaria are the Balkans. Within the **V** formed by the two sets of fold-mountains is the Rhodope plateau, which may be represented by another **V**. Between these two **V**'s is a **Y** representing the great cross-routes of the Balkans which follow the rivers Morava, Vardar and Maritza.

BULGARIA

This rectangular country consists of four parallel physical divisions, viz. :

(1) **The Danube Lowlands,** in the extreme north, south of the Danube. This plain is of great fertility, and here more than half the grain grown in Bulgaria is produced.

(2) **The Balkan Range,** which forms a thinly peopled

barrier zone between the Danube lands and the rest of the country.

(3) **The Maritza valley,** a fertile lowland producing large crops of wheat, maize, rice, sugar-beet and tobacco. The cultivation of roses, from which " attar of roses " is distilled, is an important industry.

(4) **The Rhodope Mountains,** in the south-east, are the most backward part of the country, most of the land providing only poor pasture for sheep and goats.

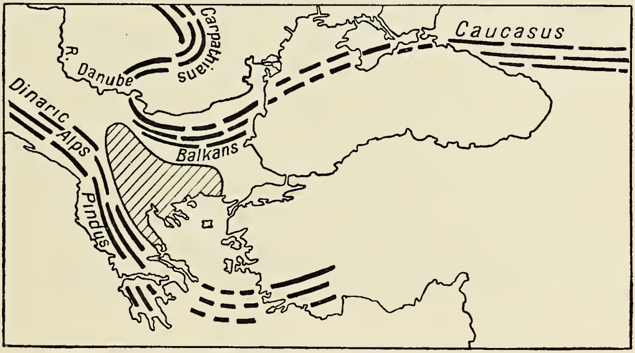
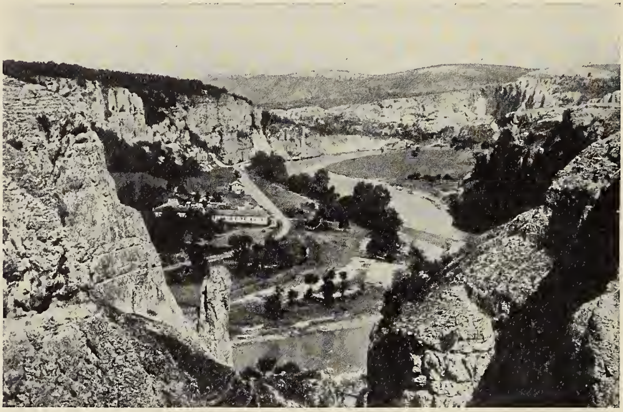


FIG. 74.—STRUCTURE OF THE BALKAN PENINSULA

The Bulgars, like the Rumanians, are nearly all peasants who own the land they cultivate. During the hot summer the whole family work in the fields from dawn to dark, and in winter the women spend much time spinning and weaving the silk, flax and wool which are produced on the farm. The houses are mostly made of clay plastered over a framework of twigs or reeds. The roof, which is frequently rounded, extends over the walls to make a verandah, on which the family sleep in the hot summers.

Sofia, the capital of Bulgaria, is situated in a basin amid the mountains of the western border. The Bulgarian name for the city means "central town," and though it is situated far from the centre of the country, it is the centre of the chief routes. From it valleys lead north-west to Belgrade, northward to the Danube, southward to the Aegean Sea, and eastward to Constantinople.



(*E. N. A.*)

FIG. 75.—THE VALLEY OF THE ISKER (BULGARIA)

Philippopolis is the centre of the fertile plain of eastern Rumelia, and **Burgas** on the Black Sea is the chief port.

TURKEY IN EUROPE

The Turks are an Asiatic people who swept into Europe in the fourteenth century. They conquered the Balkan peninsula and even got as far as the gates of Vienna. Though they were soon driven back beyond the Iron Gates, they remained masters of the Balkans for several hundred years. During the last fifty years, however, they have been gradually driven farther and farther back, so that they now possess only a small triangle of land in Europe. After the Great War they made Angora, in Asia Minor, their capital, so that Turkey is now no longer looked upon as a European Power. Strangely enough, when they ceased to have a European town (Constantinople) as their capital, they began to adopt European ways, and the Turks are now far more "European" in their mode of life than they were when they had large European possessions.

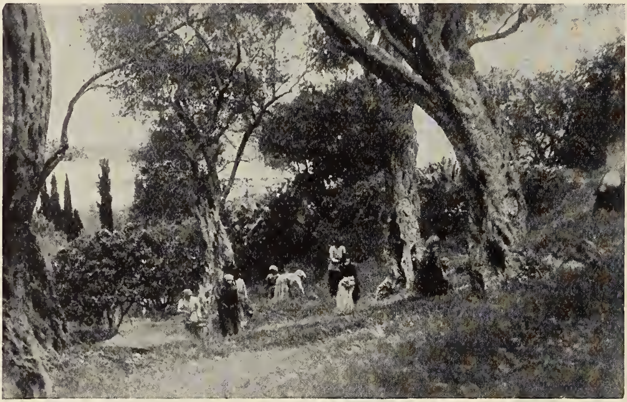
Constantinople or **Istanbul,** as it is now called, has one of the finest sites in the world for trade and defence. It is situated where the land-routes from Europe to Asia cross the narrow sea-way between the Black Sea and the Mediterranean. Here, too, the *Golden Horn* forms a sheltered and easily defended anchorage for ships. Well might the ancient Greeks, who founded the city, say that only the blind would pass over such a site !

When the Roman Empire was being attacked by Barbarians the Emperor Constantine chose *Byzantium*, as the city was then called, as his eastern capital, and the city remained the capital of the Eastern Roman Empire until it was sacked by the Turks in 1453. In spite of its excellent position, and the fact that it is linked by rail to Western Europe and the Near East, it is not now of great importance as a port or trading centre.

GREECE

Greece was the first part of the mainland of Europe to produce a great civilisation. More than two thousand years ago the Greeks were the most cultured people in the world, and their sculpture, architecture and poetry are, perhaps, the finest the world has ever known. Yet, even in the height of her glory, Greece was never a united country, but consisted of several "city states," such as Athens, Thebes and Corinth. These states were always jealous of each other, and between them there were frequent wars.

One reason for this lack of unity is the mountainous character of the peninsula. The only fertile parts are small plains which are ringed round by mountains or open only to the sea, and it was in these semi-isolated plains that the various city states developed. Of course, the Greeks *could* have united if they had willed to do so, and perhaps another people would have done so. We can never say that Nature *compels* people to do things, though she may make some things easy and others difficult.

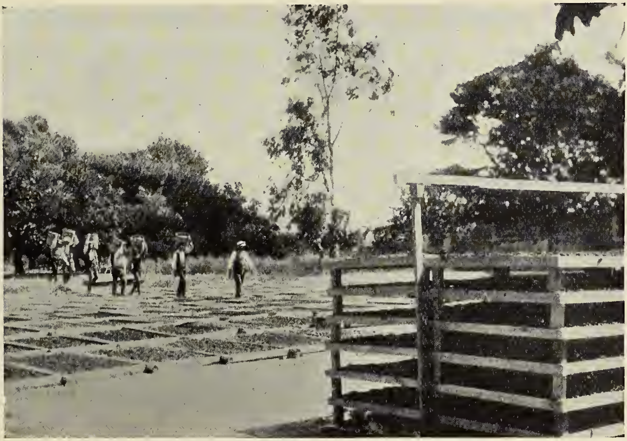


(*E. N. A.*)

FIG. 76.—GATHERING THE OLIVE HARVEST IN GREECE

The Greeks of to-day are a rather backward people. A large part of the country is infertile mountain land and the plains suffer from lack of water, especially in the hot and dry " Mediterranean " summer. Methods of farming, too, are very primitive, ploughing being done by oxen, which draw ploughs little different from those in use two thousand years ago.

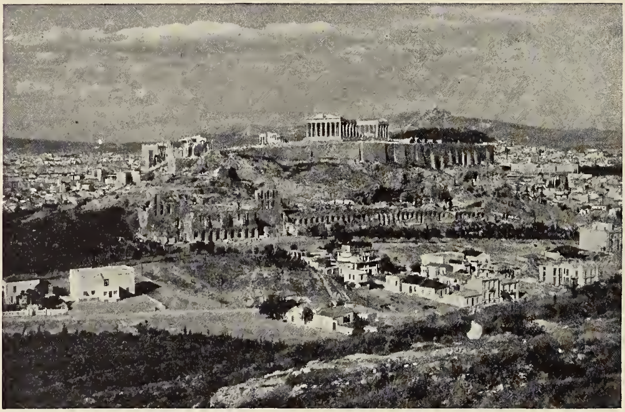
As in many other parts of south-eastern Europe the houses of the peasants are grouped together in small villages whose sites were chosen for ease of defence. Usually, too, the houses are built round a square, and all the doors and windows face inwards so that only blank walls are presented to the outside of the square. In the less fertile parts of the country the houses consist of only one room, which the family shares with the domestic animals. In the more prosperous parts, such as the extreme south-east, " the houses are mostly two-storied, with glazed windows and balconies, and have vine-trellised pergolas below, presenting an appearance of order, neatness and comfort which contrasts with the villages of northern and central Greece."



(*E. N. A.*)

FIG. 77.—DRYING CURRANTS IN THE SUN AT PATRAS

The peasants aim first at producing their own food crops—wheat, barley, vegetables and olives. In addition the majority produce "money crops" for export. The chief of these are currants and tobacco. Nearly all the *currants* are grown around the coast of the southern part of the peninsula and on the neighbouring islands. The bulk of the world's supply of currants comes from this district, and the name "currant" is derived from Corinth, which was formerly the chief exporting centre. Nowadays, however, the port of *Patras* conducts most of this trade.



(*E. N. A.*)

Fig. 78.—THE ACROPOLIS, ATHENS

Tobacco is widely grown on the eastern plains, especially in Thessaly and Macedonia. A large part of the crop is exported to Egypt, there to be manufactured into "Egyptian" cigarettes.

The indented character of the coast has always invited the Greeks to take to the sea. Ancient Greece was a sea power, and her colonies fringed a large part of the Mediterranean. In modern times, too, many Greeks are merchant seamen, and Greece ranks as the sixth country in Europe in the tonnage of shipping per head of the population.

Athens was the most powerful of the city states of ancient Greece, and is the capital of the modern country. The most famous of its ancient buildings is the *Acropolis*, which crowns the hill around which the ancient city grew.

Piraeus is the port for the capital, and the only important manufacturing town in the country.

Corinth, once the rival of Athens, is now merely a village. The *Corinth Ship Canal* is used only by Greek passenger steamers, as the heavy canal dues make it more economical for cargo vessels to go round the peninsula of Morea.

Salonica, the second largest city of Greece, is situated near the mouth of the river Vardar, and at the terminus of the railway from Belgrade. It serves not only Greece, but also a large part of Bulgaria and Serbia.

ALBANIA

This little state is one of the most primitive of all the lands inhabited by white men. As the surface is very mountainous, there is little agricultural land, and the chief occupation is cattle-rearing. There are very few towns, and most of the people live in little villages, which are situated on almost inaccessible ledges on the mountain sides. " Half a mile outside the towns you are back in the primitive Albania of two thousand years ago. The herds of cattle, sheep and goats are being tended by the women folk ; the two-wheeled carts, with the oxen ' 'neath the yoke,' date from Celtic times, and the men slouch round in the same dress ; only modern rifles have replaced the spear and the club. The Albanian men are abnormally lazy ; it is the women who work, and the warriors sit round waiting for trouble" (E. Ashmead Bartlett, *Daily Telegraph*).

EXERCISES

1. Bulgaria has, in proportion to her population, more sheep than any other European country. Give reasons why she has such large numbers of sheep.

2. Greece has eight times as many sheep as cattle. How do the physical features and the climate of the country help to explain this fact?

3. Consider these two statements:

> (*a*) "Greece has a large number of merchant ships in proportion to her population."
>
> (*b*) "Greece imports far more (by value) than she exports."

What possible connection is there between these facts?

CHAPTER XII

ITALY

ITALY is to-day one of the strongest and most prosperous countries of Europe ; yet, little more than seventy years ago there was no such country, and the land that is now Italy was divided into a number of small states. In 1860 the Italian patriot Garibaldi landed in southern Italy, with only a thousand badly armed followers, and took the first step towards the establishment of a united Italy.

There are still great differences in the speech, customs and mode of life of the people in various parts of Italy, just as there are great differences in the climate and the land surface. We speak, for instance, of "sunny Italy," and think of the land where it is always warm enough to live out of doors. Summers are hot in all parts of Italy, and in the south the winters, too, are quite warm. But if we were to visit the northern plain in winter we should find it colder than our own country. Again, in some parts of Italy the people cultivate the land at least as carefully and as successfully as our own farmers do ; but in other parts the people live and work in a very primitive manner.

To understand Italy, therefore, we must study its different parts as well as the country as a whole. The three chief **natural divisions** of Italy are : the Alps, the Northern Plain, and the Southern Peninsula and Islands.

1. THE ALPS form a great protecting wall around northern Italy, but they are by no means a complete barrier. They are crossed by many passes which have always been highways of communication between Italy and northern Europe.

In modern times the mountains have been pierced by several railway tunnels, the most important of which are the Mt. Cenis, the Simplon and the St. Gothard.

The Alps are of service to Italy in many ways. Their beautiful scenery attracts great numbers of tourists, who bring much money into the country ; the rapid streams provide large supplies of hydro-electricity, as well as water for the irrigation of the thirsty plain ; and the valleys themselves are so sheltered that they produce olives, oranges and other crops which cannot be grown in the exposed plain to the south.

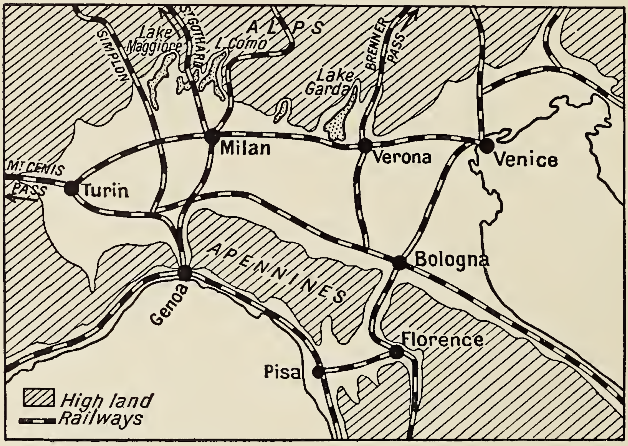
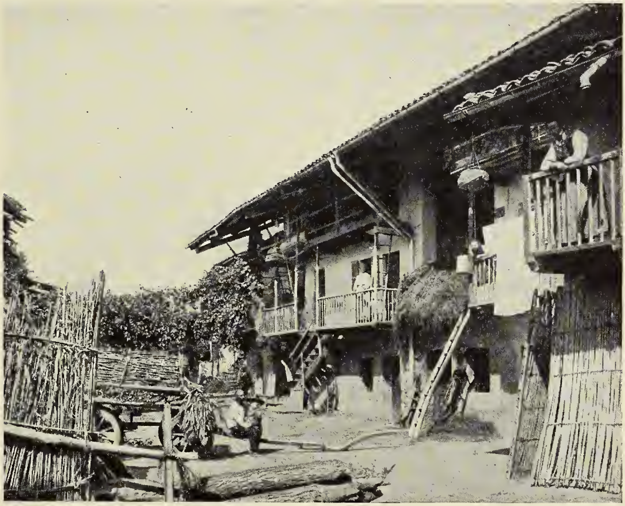


Fig. 79.—northern italy—relief, railways and towns

2. The Northern Plain was once an arm of the sea. The mud brought down by rivers from the Alps filled up this sea, thus building the plain as it now exists. The process of land building is still going on, and it is estimated

that the river Po carries down to the sea every year enough mud to form a million square yards of land.

A good deal of mud is also deposited in the bed of the river, so that the eastern half of the plain is liable to floods. To prevent the rivers overflowing their banks, hundreds of miles of dykes have had to be built on each side of the lower courses of the Po and its tributaries.



(*E. N. A.*)

FIG. 80.—A PICTURESQUE OLD FARM IN PIEDMONT

In the western half of the Po basin, however, there is often too little water, and a network of canals has been constructed to water the land between the rivers.

The chief occupation of the people is farming. The farms are generally rather small, and the methods of cultivation often very primitive, so the farmer and his family have to work hard to earn a living. In summer men, women and children are often at work in the fields from five in the morning to eight at night, with only a break at midday, when the great heat makes it necessary for them to take a *siesta.*

The chief crop is hay, especially on the irrigated lands, which produce three to seven crops a year. Great numbers of dairy cattle are kept, and much of the milk is made into such well-known varieties of cheese as Gorgonzola and Parmesan. Each farmer aims, too, at producing as much as possible of the food the family requires—wheat, maize, grapes and vegetables—and most of the housewives rear silkworms. The silkworms are hatched in spring, and then placed on trays in a room which has to be kept at an even temperature. They are fed on mulberry leaves, which are grown in the farm, and after a few weeks they spin their cocoons, each of which consists of nearly a mile of fine silk thread.

Many of the people in northern Italy are engaged in manufacturing industries, for though Italy has no coal and few minerals, she has large supplies of water power and great numbers of skilful workpeople. The chief industries are the manufacture of textiles (cotton, silk and wool) and metal goods.

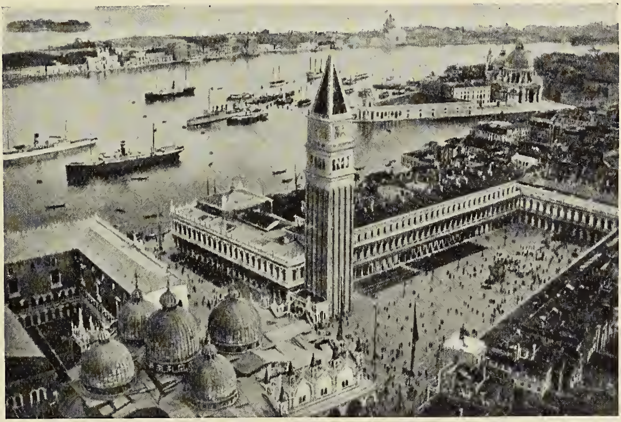
The towns of northern Italy are arranged in two lines, one line on the northern side and the other on the southern edge of the plains.

Milan, the capital of Lombardy and the second largest city of Italy, owes its modern importance to the fact that it is the chief railway centre of the northern plain (see fig. 79).

One of its chief industries is the manufacture of silk, supplies of raw material being obtained not only from the surrounding districts but also from China and Japan.

Turin is situated at the western end of the plain where the routes which follow the northern and southern edges of the plain meet those from Genoa and the Mt. Cenis Pass. Like Milan it has become a great industrial centre, but its chief speciality is the manufacture of motor-cars.

Venice was founded in the ninth century by merchants who had fled before the Barbarian invaders of Italy. They settled on a number of small islands set in a lagoon and protected seaward by sandbanks or *lidi*. At first their only means of livelihood was fishing and selling salted fish, but overseas trade soon developed and Venice became the chief port of the world. So it remained until the discovery of America and of a route round the Cape made the Atlantic the chief highway of world trade.



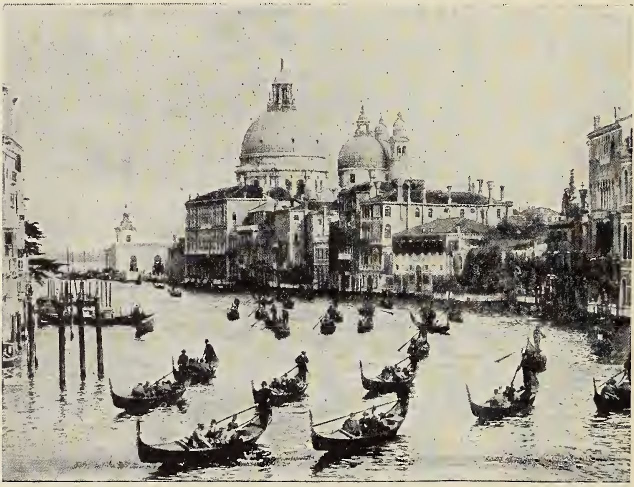
(*E. N. A.*)

FIG. 81.—AERIAL VIEW OF VENICE, SHOWING THE PIAZZA OF ST. MARK AND THE HARBOUR

In recent years the Venetians have made great efforts to revive the trade of the port. A new deep-water harbour has been constructed some distance from the ancient city.

This new port is connected by road, rail, river and canal to the rich hinterland of the Po basin and north-eastern Italy, and Venice now ranks as the third among the ports of Italy.

Genoa, though situated south of the Apennines, is really a city of northern Italy. The name is said to mean "*the Gate*," and the port owes its importance to the fact that from it a low "gateway" leads northward through the Apennines to Turin. It is, therefore, the chief commercial outlet for the Po basin, and is by far the most important port of Italy. Also, large quantities of goods which come from the east via the Suez Canal are landed at Genoa and sent by rail to France, Germany and other countries.



(*C. P. R.*)

FIG. 82.—THE GRAND CANAL, VENICE

Trieste and **Fiume,** on the Adriatic coast, were formerly the chief ports of Austria-Hungary. To-day, although they belong to Italy, their trade concerns chiefly the countries of central Europe and the Danube basin, for which they are the natural outlets.

3. SOUTHERN ITALY comprises the leg-like peninsula and the islands of Sicily and Sardinia. The " shin-bone " of the peninsula is represented by the Apennines, which are a range of fold mountains. The earth movements which raised these mountains and shaped southern Italy have not quite ceased, and many parts are still subject to earthquakes. There are also several active volcanoes, the best known of which are *Vesuvius* and *Etna*.

Whereas northern Italy has cold winters and fairly moist summers, southern Italy has warm, moist, sunny winters and very hot, dry summers. These differences in the climate cause differences in the method of farming and in the life of the people. The peasants of the south are not troubled by winter frost, but the drought of summer presents a difficult problem. Yet they are such skilful farmers that they produce crops all the year round. Wheat, peas, beans and vegetables grow well in the mild, moist and sunny winters ; olives and grapes, which ripen well in dry, sunny weather, are the chief crops of summer ; and oranges, lemons and other " Mediterranean " fruits are grown where water can be obtained for irrigation.

Yet there are striking differences in the productivity of various parts of southern Italy. In some districts the land is cultivated with the utmost care and skill and supports very large numbers of people. In other parts large areas of land are almost waste and the few inhabitants are desperately poor.

The most productive parts of southern Italy are the Arno basin, the region around Naples, and some of the coastal lowlands of Sicily.

In the *Arno Basin* of Tuscany the lowlands have been carefully drained, terraced and irrigated, and the peasants work so hard that there are few more productive regions in Europe. Every season brings its harvest—hay in spring, wheat in summer, grapes in autumn, and olives in winter.

But although the peasants grow nearly all the food they require they are seldom well to do, since there are so many people on a small area of land. Many of them are so poor that they cannot buy the seeds, manure and agricultural implements they need ; so these are often provided by the landowner, who receives as payment half the year's crops.

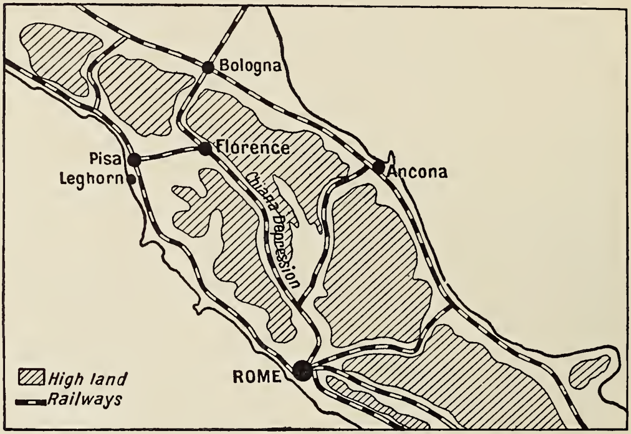
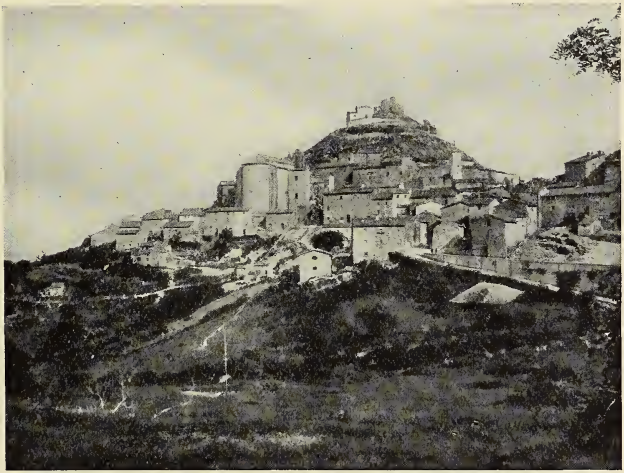


FIG. 83.—SKETCH-MAP OF CENTRAL ITALY
(Showing how routes are controlled by the relief)

In this region are three of the most famous of Italian cities. **Florence** is situated near the middle of the basin, where the route from Rome to the northern plain crosses the Arno. **Leghorn** stands on an artificial harbour near the mouth of the Arno, and is the chief port of the region. It is also noted for its straw-plaiting. **Pisa,** famous for its leaning tower, was once a rival of Venice, but its harbour silted up, and it is now only a market town for the rich farming district which surrounds it.

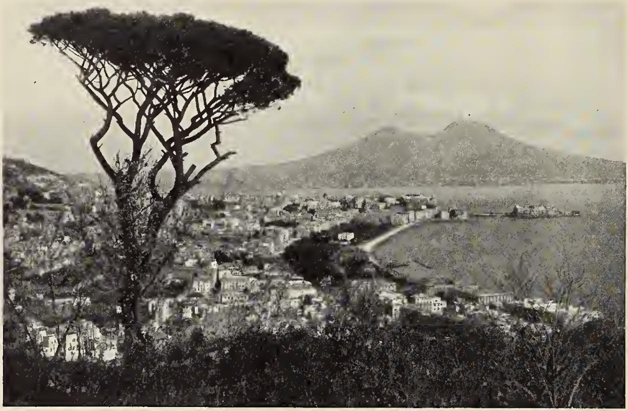
The Plain of Latium, on which Rome is situated, was once a rich farming district, but the drainage channels and irrigation works which the Romans had constructed fell into disuse, and the plain became a disease-breeding swamp. Until quite recently it was used only as winter pastures for sheep which spent the summer on the Apennines. Much of the plain has, however, now been reclaimed, and many farm " colonies " have been established upon it.



(*E. N. A.*)

FIG. 84.—AN ITALIAN HILL-TOP TOWN, BUILT ON THE SUMMIT OF AN EXTINCT VOLCANO

Rome is situated where seven hills guard the lowest crossing-place of the river Tiber. It is the most convenient point from which to rule the peninsula, and was fairly centrally situated within the Roman Empire. Though it is far away from the northern plain, which is the most densely peopled and most progressive part of Italy, its historic associations made it the only possible choice for the capital of modern Italy. During the last seventy years its population has grown very rapidly, and it now contains almost a million people.



(*E. N. A.*)

FIG. 85.—NAPLES, WITH VESUVIUS IN THE BACKGROUND

The Campagna, which is the plain around the Bay of Naples, surpasses even Tuscany in productivity. **Naples** is the largest city of southern Italy and is beautifully situated on a deep harbour near the foot of Vesuvius. It is one of the chief ports of Italy, and has many factories, some of which are run by hydro-electricity generated by the rapid streams of the Apennines.

In *Sicily* the coastal plains are specially noted for the cultivation of oranges and lemons, most of which are exported from **Palermo.**

Between the intensively cultivated regions mentioned above are large areas which are infertile or badly cultivated. The *Apennines* consist largely of barren limestone, and are suitable only for sheep pasture. In Liguria, however, the slopes facing the sea have been carefully terraced and produce large crops of grapes, olives and oranges.

Calabria, which forms the " toe " of Italy, is composed of hard, old rock, and cultivation is restricted to the valleys where alluvium has accumulated. *Apulia*, which forms the " heel " of Italy, is composed mainly of limestone, and so suffers from drought. It is, however, noted for a specially " hard " wheat which is very suitable for making macaroni.

Sardinia, unlike the rest of Italy, is composed of hard, old rock. The island is mountainous. There are few fertile lowlands and most of the inhabitants lead a very primitive life. The rearing of cattle, sheep and goats is the chief occupation, though some grapes, olives and other warm temperate fruits are also grown. Irrigation schemes, which the Italian Government have in hand, will lead to greatly increased productivity in the near future.

EXERCISES

1. What advantages has Rome as the capital of Italy ? What disadvantages ?

2. On an outline map of Italy show the following railway route, marking the towns and the times :

	Turin.	*Alessandria.*	*Genoa.*	*Pisa.*	*Leghorn.*	*Rome.*
Time	8.5	9.27	10.55	14.8	14.42	19.45

3. Denmark has five times as many cattle, in proportion to the population, as Italy. Give reasons for this great difference.

4. On squared paper draw a 2-inch square. Let this represent

all the land of Italy, and within it draw rectangles to show the uses made of the land according to the following table :

—	Ploughed Land.	Meadow and Pasture.	Gardens and Vineyards.	Forest.	Unproductive.
Percentage of total	45	20	5	18	12

5. The chief imports of Italy consist of cereals and other vegetable foodstuffs, raw materials for textiles and minerals. Make a list of the probable imports under each of these heads.

6. Make a diagram to show, on a suitable scale, the following exports from Italy :

—	Silk and Artificial Silk.	Cotton Goods.	Vegetables and Fruit.	Cheese.	Vehicles.
Millions of lire	3	1·9	1·6	0·5	0·5

Write a short note about each commodity, saying where it is produced in Italy, and if possible, why.

CHAPTER XIII

THE IBERIAN PENINSULA

THE writer once asked a class to write down the things they first thought of when the word " Spaniard " was mentioned. Pupils thought of all sorts of things—oranges, onions, guitars, black cloaks, bull-fights, duels, dancing, sunny skies, and so on—but no one thought of a man *working*. We see so many pictures of Spaniards singing, dancing, or idling in the sun, that we are apt to forget that they have to work hard like everybody else. Of course, the ordinary workaday life of people is not romantic ; but it is vastly more important and should be more interesting than the ways in which they amuse themselves.

When we begin to study the work of a people, we have to consider also the kind of land they live in. If the land surface and the climate are varied, so will the work of the people vary from place to place. This is true of Iberia as of most other countries, for when Nature built the peninsula she did not make it all alike, but moulded together many diverse elements.

The " core " of Iberia is a block of hard, old rock, which forms the plateau called the *Meseta*. On the northern, southern and eastern edges of this plateau are ranges of fold mountains, such as the *Pyrenees*, the *Cantabrians* and the *Sierra Nevada*. Between the folds and the block are the sunken lowlands of *Andalusia* and *Aragon* (see fig. 86).

Iberia is therefore a land of great physical variety. Its various parts also show great differences of climate. The north-west is like a warmer Cornwall, with mild winters, warm, sunny summers and plenty of rain ; the south-east has a rather dry " Mediterranean " type of climate ; and the central portion has so little rain that large parts of it are practically desert.

These differences in climate cause great differences in the mode of life of the people. In the north-west the people live by dairying, stock-raising, fruit-farming and fishing ; in the south-east water is scarce and the chief crops are the "Mediterranean" fruits—grapes, olives, oranges and lemons; and on the central plateau the arid pastures are largely given up to sheep-rearing.

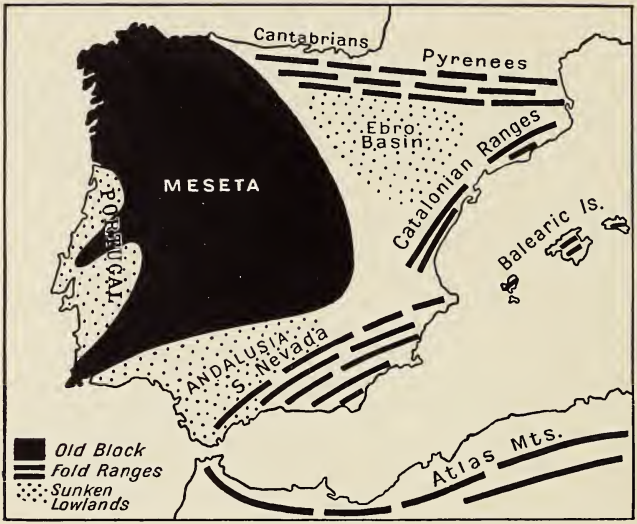


FIG. 86.—IBERIA : STRUCTURAL DIVISIONS

The people of Iberia, too, belong to different types. Omitting the Portuguese, who will be dealt with later, we may distinguish five types—*Galegans* or Galicians in the north-west, *Basques* in the north-east, *Catalans* in the east, *Castilians* in the centre, and *Andalusians* in the south. The homelands of these people vary considerably in their physical features, climate and products, and a division of Spain according to the type of people corresponds fairly well with divisions made according to the land surface and the climate.

THE NATURAL REGIONS OF SPAIN (See fig. 87)

(1) **The Northern Coastlands.**—This region differs from the rest of Spain in having a mild, moist, equable climate. The abundant rainfall favours the growth of meadow grass, and the winters are so mild that the growing season for plants lasts all the year. Unfortunately the region is so mountainous that there are no large areas of fertile land, dairying and the cultivation of grain and fruit being confined to the valleys. In *Galicia*, as in the similarly situated peninsula of Cornwall, many of the people are fishermen. The chief fish caught are sardines and tunny ; **Vigo,** the chief port of Galicia, is specially noted for the canning industry.

Asturias and the *Basque Provinces* have considerable mineral wealth. Iron ore is mined near **Gijon, Bilbao** and **Santander,** and coal is mined around **Oviedo.** Most of the iron ore is exported to South Wales, and it is only in the Basque Provinces that there has been much industrial development.

(2) **The Mediterranean Coastlands (S.E. and E. Coastlands).**—This region differs greatly from the northern coastlands, for the summers are hot and dry, and even the winter rainfall is scanty. In spite of the almost constant drought, the Mediterranean coastlands are the most densely peopled parts of Spain. This is because irrigation is more widely practised here than anywhere else in Spain.

In *Valencia,* which is the most productive province, the irrigation system was initiated by the Romans and considerably extended and improved by the Moors, who ruled Spain from the eighth to the fifteenth centuries. An intricate system of channels and pipes conveys the life-giving water from the mountain slopes to terraced fields and gardens, which are known as "huertas." This region, along with the neighbouring province of *Murcia,* is the chief orange-exporting district of Spain.

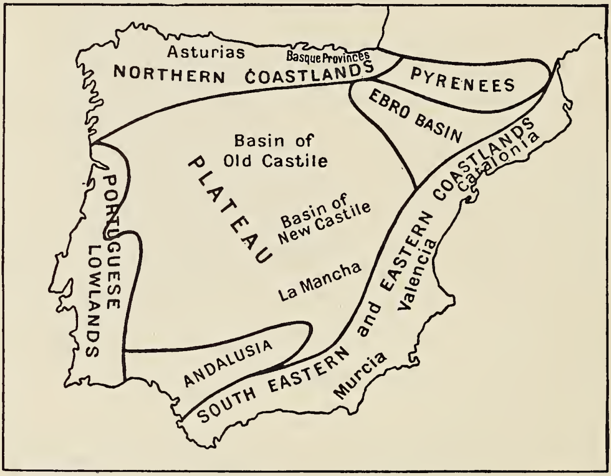


FIG. 87.—IBERIA : NATURAL REGIONS

The *Elche* district is notable as the only part of Europe where dates are grown.

Barcelona, on the north-eastern coast, is the chief city of Catalonia. The Catalan language is more like French than Spanish, and the people have for a long time considered themselves to be almost a separate nation. After the revolution in Spain (1931), when the King was deposed and a Republican government was set up, Catalonia asserted her claim to manage her own affairs though remaining part of the Spanish Republic.

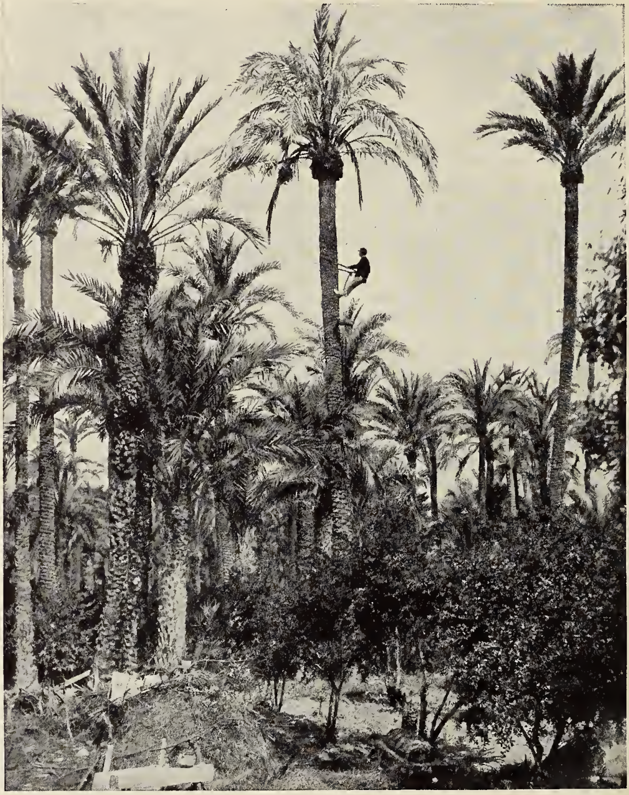
Barcelona is the chief manufacturing city and the busiest port of the peninsula. It is hard to say why this city has developed great industries, for the district has no great supplies of coal, minerals or raw materials. Probably the chief cause of the industrial development is the energy and enterprise of the people. The chief industries are the manufacture of textiles, machinery, glass and paper. Formerly these industries were almost entirely dependent on British coal, but in recent years hydro-electricity, generated by the rivers flowing from the Pyrenees, has to a large extent been substituted for coal.

(3) **The Ebro Basin** is a sunken lowland bounded on all sides by high land. It is therefore in a deep " rain shadow " and suffers greatly from drought. A large part of the basin is arid steppe-land, but near the rivers are irrigated areas of great fertility. **Saragossa** is the only large town in the basin.

(4) **Andalusia.**—This lowland, situated between the Meseta and the Sierra Nevada, is the most delightful and most picturesque of the Spanish provinces. Indeed, when we see in the mind's eye a picture of " Sunny Spain " it is almost sure to be one of Andalusia.

Both nature and man have helped to make this the most productive province of Spain. It is specially favoured by nature in that it is the most southerly plain in the country, and the only one that is open to the warm, moist winds which blow from the Atlantic in winter. Abundant sunshine and frequent showers combine to make winter an excellent growing season, but the summers are so dry that without irrigation little could be grown. It happened, however, that Andalusia was the part of Spain which the

Moors most carefully developed, and over which they ruled



(*E. N. A.*)

FIG. 88.—A PALM GROVE IN ELCHE

for the longest period. They made good the deficiency of summer rainfall by ingenious systems of irrigation and by the construction of terraced gardens which utilised every drop of water that could be brought in channels and pipes from the hillsides.

Many of their irrigation works are still in use, but unfortunately many others have been ruined, so that while some districts are of amazing fertility others are barren steppe and semi-desert. In recent years the Spanish Government has built reservoirs in the mountains to replace the ruined irrigation works, and at the same time provide hydro-electricity for factories.

The chief crops of the region are olives, oranges and vines.

Seville, situated at the head of navigation of the Guadalquiver, is the chief market centre and port of the region. **Cadiz** was founded by the Phœnicians, and is therefore one of the oldest ports in Spain. In the value of its trade it still ranks as the third port of Spain, being surpassed only by Barcelona and Bilbao. **Jerez** gives its name to sherry, a wine which is produced only in the surrounding district.

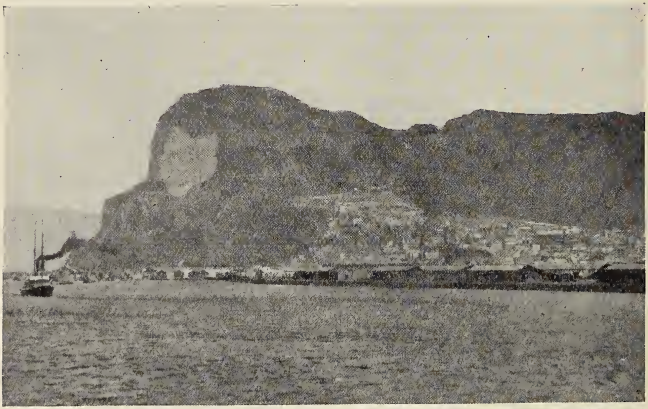
Gibraltar, at the southern tip of Spain, is a British fortress and naval station.

(5) **The Meseta.**—This high and barren plateau forms a striking contrast to the fertile lands situated around its margins.

The predominant features of the landscape are dusky yellow plains, craggy hills, and deeply cut watercourses, which are almost dry for the greater part of the year, but become raging torrents after a thunderstorm. The elevation of the land and the distance from the sea cause bitterly cold winters and broiling hot summers, while the clearness of the atmosphere causes great differences between day and night temperatures, and between the sunny and shady sides of the street.

Trees and cultivated fields are rare, and the scanty brown grass serves only to support herds of sheep and goats. The few inhabitants live crowded together in little walled towns and villages built for sake of security on the flanks or crests of the hills.

The most productive part of the plateau is the "basin" of *Old Castile.* The district around **Valladolid,** which is served by an irrigation canal, is the chief wheat-growing region in Iberia. The "basin" of *New Castile,* on the contrary, is one of the most barren parts of the peninsula. The plains of *La Mancha,* indeed, remind one of the deserts of northern Africa, and the chief product of the region is esparto grass, which is used for making high quality paper.



(*Norway Travel Bureau*)

FIG. 89.—GIBRALTAR

Although the hard, old rocks of the plateau do not provide much fertile soil, they are rich in minerals. The coal and iron fields of the northern margin of the plateau have already been mentioned (p. 153). On the southern edge of the plateau, in the Sierra Morena, are deposits of copper, iron and mercury. **Rio Tinto** is specially famous for copper ore, which is exported from **Huelva,** most of it being sent to South Wales.

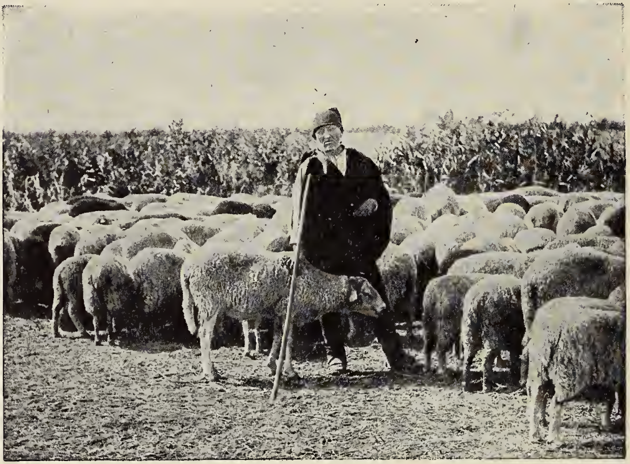
Madrid, the capital of Spain, is situated almost exactly in the centre of the peninsula, and is therefore the most convenient place from which to rule the country. From other points of view its situation is poor ; the extremes of winter cold and summer heat make it an uncomfortable place to live in ; the surrounding country does not produce much food, or coal, or raw material ; and it is far from the great centres of population.

PORTUGAL

The Iberian peninsula, like the Scandinavian peninsula, is divided into two countries. We have seen that in Scandinavia the " keel " of high land down the middle of the peninsula forms a natural boundary between the two countries ; but in Iberia there is no such well-marked physical boundary. It is true that the political boundary roughly follows the edge of the Meseta, where there are waterfalls marking the limits of navigability of the rivers ; but geography alone cannot give sufficient reason for the separation of the two countries. History tells us, however, that when the Spaniards were driving out the Moors they had so much fighting to do in the south-east that once Portugal was cleared of the enemy they left her to her own devices and allowed ambitious noblemen to establish her as an independent country. Then she became the ally of England, who helped her to maintain her independence. When Columbus, in the service of Spain, discovered America, and Vasco da Gama, in the service of Portugal, found the way to India via the Cape, the two countries became bitter rivals, and so the breach between them was widened.

Still, the Portuguese and the Spaniards belong to the same stock of people and their homelands are alike in many respects ; it is not surprising, therefore, that the ways of life of the two peoples are also very similar.

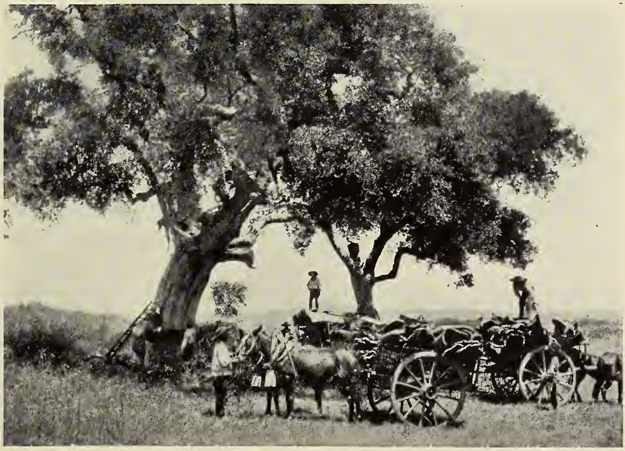
Like the Spaniards, the Portuguese are mostly peasant farmers, who cultivate wheat, maize, vegetables, vines and olives, or rear sheep, goats, pigs or cattle. Like the Spaniards, too, many of the Portuguese still stick to old-fashioned and primitive methods of farming, so that there are large parts of the country where the land is very badly cultivated, and the people remain desperately poor. In some districts, however, careful methods of cultivation prevail, and the land is made to yield a comfortable livelihood. The most intensively cultivated district is the valley of the Douro, specially noted for "port" wine, which takes its name from **Oporto.**



(*E. N. A.*)

FIG. 90.—A SHEPHERD ON THE MESETA OF SPAIN

In southern Portugal the chief sources of wealth are pigs and cork. Strange as it may seem, both are "products of the oak tree," the pigs being fed chiefly on acorns from the evergreen oak, while the cork is the bark of another variety of oak tree.



(*E. N. A.*)

FIG. 91.—STRIPPING CORK FROM THE TREES IN PORTUGAL

Lisbon, the capital of Portugal, is situated on the broad, landlocked estuary of the Tagus. It conducts most of the trade of the country, exporting cork, wine and fruit, and importing coal, wheat, fish, sugar and other foodstuffs.

It is a calling station for ships bound for the East, via Suez or the Cape, and has much trade with South America, to which it is the nearest European port.

EXERCISES

1. Draw a map to show Madrid as the centre of the Spanish railway system.

2. On the above map show by a special marking the following " through route " (Sud Express) :

Bordeaux.	*Biarritz.*	*Burgos.*	*Madrid.*	*Lisbon.*
17·39	20·33	2·43	9·15	18.42

3. Spain is developing hydro-electric schemes :

(*a*) In which season will the reservoirs be lowest ? Why ?

(*b*) The Pyrenees at present supply nearly all the hydro-electric power. Give *two* reasons why this is so.

4. In proportion to the size of the country, Italy has three times as many cattle as Spain and produces twice as much wheat, but little more than half the quantity of oats.

Give reasons for these facts.

CHAPTER XIV

GERMANY

Germany is a Federal Republic composed of seventeen states. Little more than a hundred years ago there were dozens of such states, but the weaker ones were gradually absorbed by the stronger, and in 1871 *Prussia*, the largest and strongest of them all, persuaded them to unite to form one powerful country.

One reason why there were, and still are, many different states in Germany is that the surface of the country is very varied. In the centre and south there are many basins and plateaus separated from each other by ranges of hills ; and on the northern plain communication was formerly made very difficult by forests and marshes. So the German territory was divided into a number of different " homelands " each more or less separate from the rest. Even to-day there are well-marked differences between Prussians, Bavarians, Saxons, and so on. It would be tedious to describe these peoples and their homelands separately, and it is more convenient to divide Germany into natural and economic regions as follows :

(1) The Southern and Central Highlands.

(2) The Northern Plain.

(3) The mining and manufacturing belt situated between the highlands and the plain.

(4) The Rhine Valley.

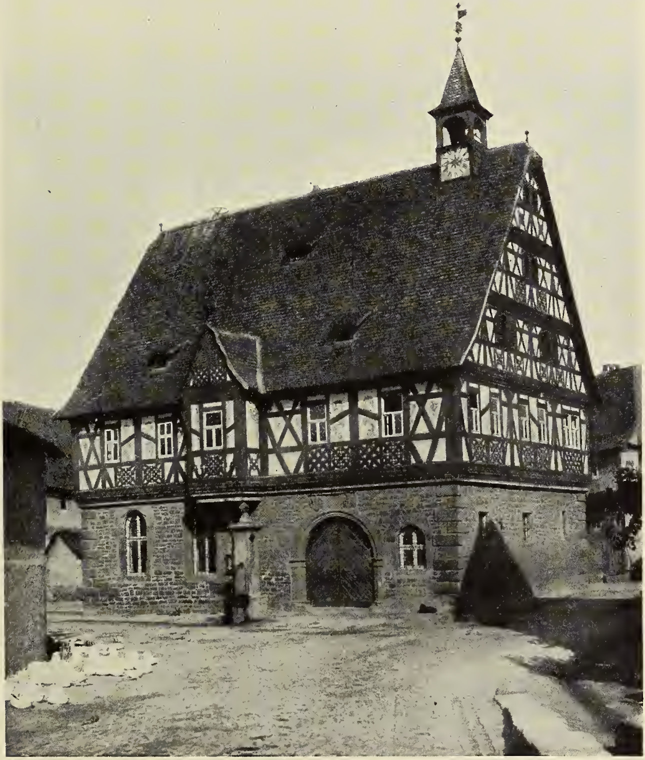
1. THE SOUTHERN AND CENTRAL HIGHLANDS

Though there are many famous cities in this part of Germany, the great majority of the people are farmers. Most of the farms are quite small, and must be cultivated very carefully to make them yield enough to support a family. Hence everyone must work, and if we were to visit the district we should be sure to be struck by the number of women and children we should see working in the fields, driving ox-teams or carrying produce to market.

The farmer aims first at growing sufficient food for his family and his farm animals ; so the chief crops are wheat, rye, potatoes, oats, beans, peas and vegetables. In addition to these he must produce some crops which will bring in money with which to buy clothing, farm stock, farm implements, etc. These " money crops " vary according to the climate, land surface and soil. *Vines* are generally grown on the sunny slopes facing south, especially in the valleys of the Main and the Neckar. *Hops* are extensively grown in Bavaria.

The farmhouses of southern Germany are generally grouped together in picturesque villages which are closely dotted over the fertile lands or situated in isolated clearings in the forests which remain on the less fertile hillsides. The lower story of the farmhouse is usually built of stone, and contains stable, cowshed, barn, storeroom, and the family living-room. In the hilly lands all the rest of the house is frequently constructed of wood, and even in the lowlands the walls of the older houses consist of a framework of timber filled in with rubble or stones. The manure heap is almost invariably situated near the front door. No German farmer would consider this an offence to eyes or nose ; on the contrary, it is an index of prosperity—the bigger the heap, the better his farm.

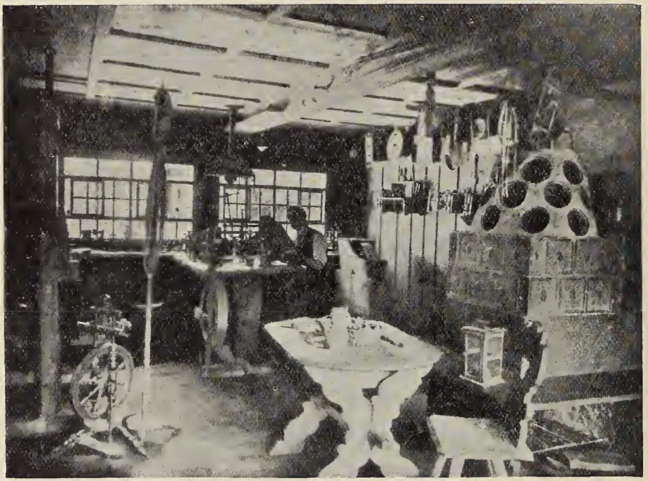
Southern Germany is also a busy manufacturing district,



(*German Rys. Inform. Bureau*)

FIG. 92.—A TOWN-HALL IN SOUTHERN GERMANY
(Note the high-pitched roof and the wooden framework of the upper story)

though we should see little evidence of this in a journey through the country. This is because the great majority of the factories are simply parts of the dwelling-houses, while the larger factories are usually run by electricity, so that there is no need for them to be crowded together in smoky towns. Instead, they are frequently situated in the midst of the fertile fields, and the factory workers often live on the farms and help in the farm work in the evenings. These factories generally specialise in the production of small articles whose manufacture requires great skill but little raw material. The *Black Forest* district, for example, specialises in the manufacture of cuckoo-clocks and mouth-organs, while other districts manufacture electrical apparatus, toys and scientific instruments.



(*German Rys. Inform. Bureau*)

FIG. 93.—A CLOCKMAKER'S WORKSHOP IN THE BLACK FOREST

Among the great cities of southern Germany are : Munich, Nurnburg and Stuttgart. **Munich** is the capital of Bavaria. It is situated in the middle of the Bavarian plateau and has become a great railway centre. From it railways radiate to France, northern Germany, Austria and Italy. Its special industry is the brewing of beer, from hops which are grown in the surrounding district.

(German Rys. Inform. Bureau)

FIG. 94.—TYPICAL SCENE IN SOUTHERN BAVARIA

Nurnberg is specially noted for the manufacture of toys, pencils and electrical instruments. It is situated on a canal which joins the Main and the Danube. This canal is now being enlarged, and when the work is completed vessels will be able to sail from the North Sea, via the rivers Rhine, Main and Danube, to the Black Sea.

Stuttgart is situated near the head of navigation of the river Neckar. It is specially noted for the manufacture of pianos and for the printing of books.

2. THE NORTHERN PLAIN

A curious feature of this plain is that the large rivers —Weser, Elbe and Oder—are very nearly linked up by their tributaries. Notice, for example, how close the Elbe at Magdeburg is to the Aller, which is a tributary of the Weser; how near the Oder at Frankfurt is to the Spree, which is a tributary of the Elbe; and again, north of Berlin, how nearly the Oder and the Elbe are linked by a tributary of the latter river.

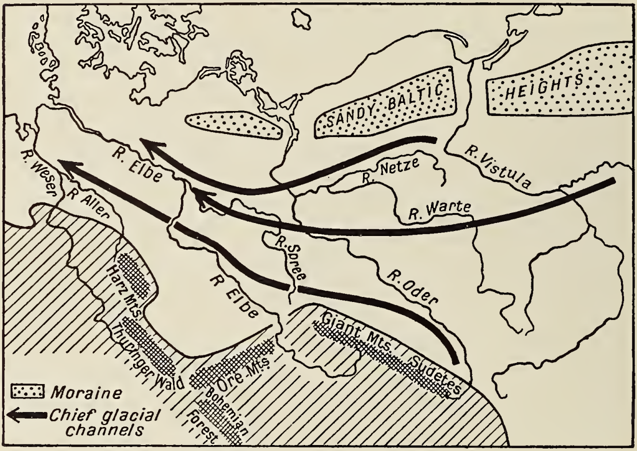
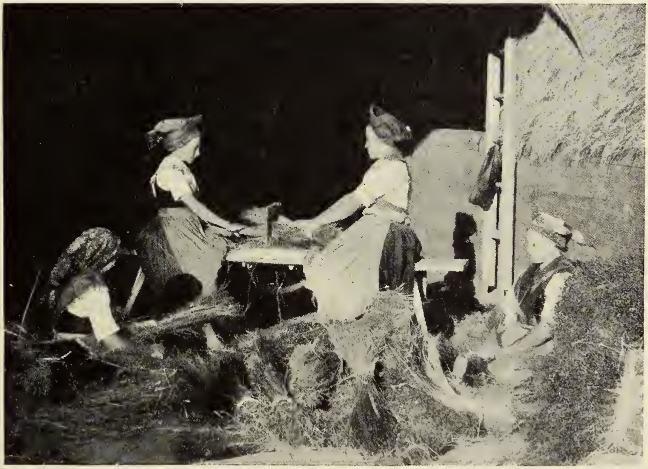


FIG. 95.—THE GERMAN PLAIN

To find the cause of this we must go back to the Great Ice Age, when a vast ice-sheet occupied northern Germany and prevented the rivers from reaching the Baltic. Instead, all the water found its way along the edge of the ice-sheet to the North Sea, thus cutting channels which are now occupied by the above-mentioned "links." As these channels run mainly east and west, they helped the Germans to spread over the plain, and in modern times they are followed by canals which are of great service to German traders. When improvements, which are now in hand, have been completed it will be possible for large barges to sail from the Rhine right across the country to Warsaw, the capital of Poland.



(German Rys. Inform. Bureau)

FIG. 96.—PREPARING FLAX IN NORTHERN GERMANY

Another effect of the Ice Age is to be seen in the *Baltic Heights*, a belt of low hills parallel to the Baltic coast. These represent the moraine which was deposited by the ice-sheet when it melted. The sandy soil of which the hills are composed is rather infertile, so the land is usually divided into large farms worked by hired labourers, who live in dreary villages strung along the main roads.

South of the Baltic Heights the fertility of the land varies greatly. East of the Elbe there are large areas which were formerly marshy, and to the west of that river are broad expanses of sandy heath. The Germans have made great efforts to improve these poor lands, by draining the marshes and applying large quantities of artificial manure to the sandy soils, and nowadays many areas which were formerly waste are producing good crops of rye, wheat, oats, barley or potatoes.

The best farming lands of the German plain are those around **Magdeburg** and **Breslau.** The former region is specially noted for the cultivation of sugar-beet, and Magdeburg is one of the world's chief centres for the manufacture of sugar. Around Breslau, in the province of Silesia, are many large estates which specialise in the production of wheat, potatoes and sugar-beet.

Berlin, the capital of Germany and the second city of Europe, is situated on the river Spree about half-way between the Elbe and the Oder, and between the Baltic coast and the southern highlands. It is the focus of the roads, railways, canals and air routes of Germany, and besides being the centre of government and finance it has developed many industries, notable among which are the manufacture of electrical apparatus, clothing and foodstuffs.

3. THE MINING AND MANUFACTURING BELT

The marginal zone between the Central Highlands and the Northern Plain is a densely peopled region which embraces most of the mining and manufacturing areas of Germany.

(*a*) The most important of these is the *Ruhr Basin,* so called after a right-bank tributary of the Rhine. This district produces three-quarters of Germany's coal and contains the chief iron and steel and textile manufacturing areas in the country. **Essen** is the largest town engaged in the iron and steel industry. It was formerly world-famous as the home of the Krupp armament factories ; but as Germany was disarmed by the Peace treaties, these have now been adapted for the manufacture of locomotives, rolling stock and miscellaneous metal goods. **Elberfeld** and **Barmen** are "twin" towns which specialise in the manufacture of cotton, woollen, silk and other textiles.

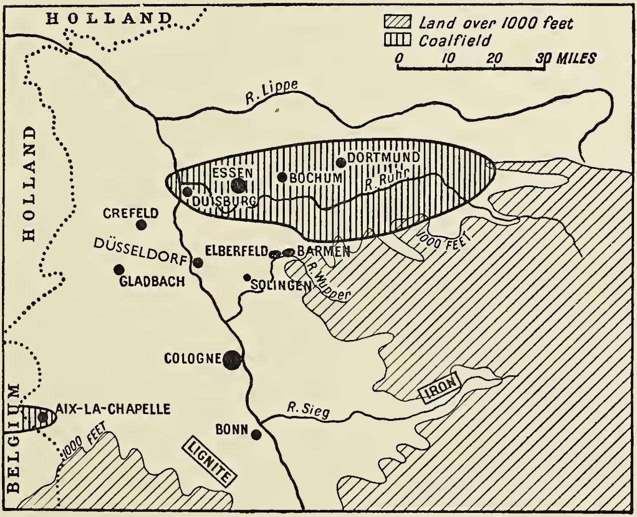
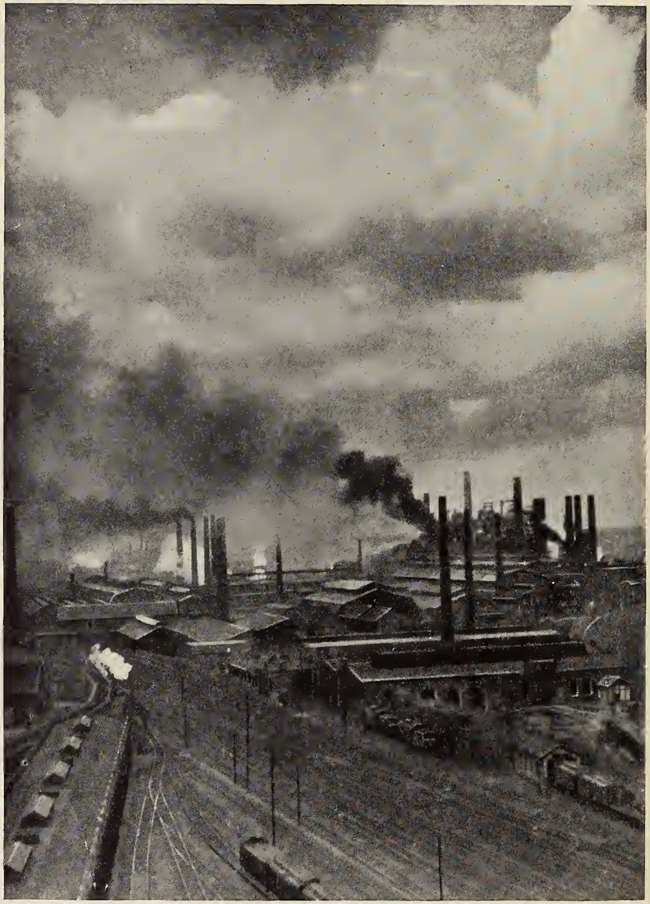


FIG. 97.—THE RUHR INDUSTRIAL REGION

Düsseldorf, on the Rhine, is one of the chief ports of the region. It receives iron ore, wheat, oil and timber from other countries and sends out coal and manufactured goods.

The industrial region extends west of the Rhine to the Belgian boundary. **Aix la Chapelle** (Aachen) manufactures textiles, metal goods and glassware ; and **Crefeld,** which is



(*German Rys. Inform. Bureau*)

FIG. 98.—STEEL WORKS AT DORTMUND, IN THE RUHR DISTRICT

joined to the Rhine by a short canal, specialises in the manufacture of velvet.

(*b*) *The Hartz Mountains* formerly produced large quantities of copper, lead and silver, and still has many factories engaged in the production of various metal goods. **Stassfurt** is the centre for the mining of potash and other salts, which were deposited there millions of years ago when an inland sea dried up. The salts are made into the artificial manures which are so lavishly used by the German farmers, and are also used as the raw material for the manufacture of chemicals.

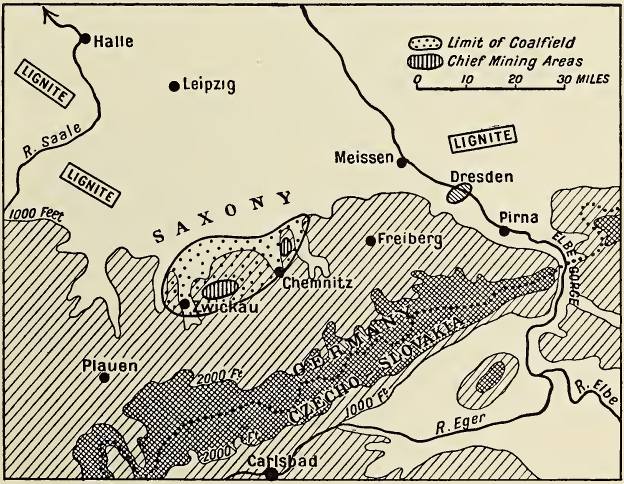


FIG. 99.—THE SAXONY INDUSTRIAL REGION

(*c*) *Saxony*, situated to the north of the Ore Mountains, is the most densely peopled state of the German Republic, and is second only to the Ruhr as a manufacturing region.

It has a small coalfield, but the amount of coal produced is not sufficient for the needs of all its factories.

In the north-west of the state, and around Halle, there are large deposits of " brown coal " or *lignite*. Formerly, little use was made of the lignite, as it was difficult to burn, but nowadays the Germans use great quantities of it for the generation of electricity, for the distillation of motor spirit, and for the manufacture of "briquettes," which are used as domestic fuel. In this way she is able to save so much coal that, although she lost two coalfields as a result of the war, she is still able to export many millions of tons of coal every year.

Chemnitz, the chief industrial centre of Saxony, specialises in the manufacture of textiles, metal goods and glassware. **Dresden,** the capital of Saxony, is situated on the Elbe, a little distance below the gorge by which the river breaks through the Ore Mountains.

Leipzig is situated in the middle of a great " bay " of lowland backed by the Ore Mountains, the Thuringian Forest and the Hartz Mountains. It is especially noted for the printing of books.

4. THE RHINE VALLEY

If we were to follow the Rhine from its source in Switzerland to its mouth in Holland we should pass through many different types of country and see many different ways in which men earn a livelihood. The Swiss Rhine, from Mount St. Gothard to Lake Constance, is a rapid mountain torrent flowing through rocky gorges and deep valleys. The river may be said to become German when it enters Lake Constance, since the latter is entirely in Germany. Even the town of Constance on the southern shore is in German territory.

Friedrichshafen, on the northern shore of the lake, is famous as the birthplace of the Zeppelin, and is still the chief German centre for the construction of airships and aeroplanes.

Between Lake Constance and Basle the river is still too swift-flowing for easy navigation, and at **Schaffhausen** a ledge of hard rock forms a fine waterfall which is utilised for the generation of hydro-electricity. At Basle the river

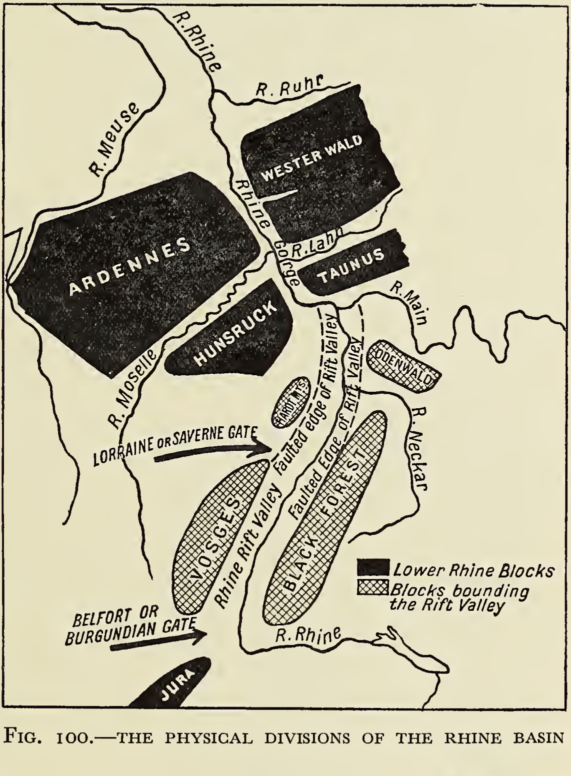


FIG. 100.—THE PHYSICAL DIVISIONS OF THE RHINE BASIN

turns northward and enters a broad, flat-bottomed trough which lies between the Vosges on the west and the Black Forest on the east. This trough is known as the *Rift Valley* of the Rhine, since it was formed by the land sinking between parallel faults.

Between Basle and Strasbourg navigation is hindered by shallows and rapids, but a canal now in course of construction will eventually allow large barges to reach Basle. Moreover, hydro-electricity will be generated at the locks and weirs, so the river will then be doubly harnessed to the service of man.

Strasbourg, on the French side of the river, and **Kehl,** on the German side, are the present limits of navigation. To them trains of barges, drawn by powerful tugs, bring cargoes of coal, wheat and petroleum.

Mannheim, at the confluence of the Rhine and the Neckar, is another busy port, whose facilities for the assembling of raw materials have aided the development of many manufacturing industries.

Frankfurt, on the Main (the largest tributary of the Rhine), is situated in a region so fertile that it is sometimes known as the " Garden of the Rhine." Moreover, the many valleys which meet there are followed by railways from all parts of southern and central Germany, and so Frankfurt has become a great commercial centre. It is also one of the chief banking centres of Europe, and is noteworthy as the original home of the Rothschilds.

Below **Mainz** the river again turns northward and enters a deep, narrow valley which is known as the *Rhine Gorge.* Here terraced vineyards clothe the steep sides of the valley, and above them rise the ruins of many a castle from which medieval barons levied toll on the passing boats.

Coblenz is situated at the confluence of the Moselle and the Rhine and a little north of the confluence of the Lahn and the Rhine. It is, therefore, at the meeting of four

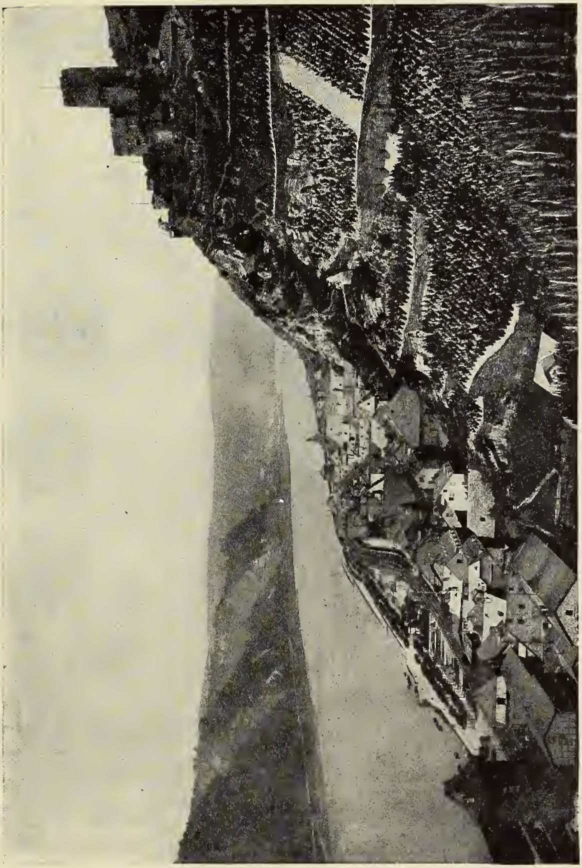


FIG. 101.—THE RHINE GORGE, WITH TERRACED SLOPES

(*E. N. A.*)

riverways ; but as neither the Moselle nor the Lahn is easily navigable, and as neither of these valleys is followed by an important railway, the city has not a large population.

Bonn, where the Rhine Gorge ends and the valley opens out the plain, is noted for its university. Near by is one of the richest lignite fields of Germany.

Cologne is situated at the limit of navigation for sea-going steamers. It is also at the point where the east-to-west route along the edge of the German Highlands crosses the river. It has, therefore, become a great port, a great railway centre, and a busy manufacturing centre. Below Cologne the Rhine flows across the German plain, past the smoky industrial towns of the Ruhr district and the busy river ports of Düsseldorf, Duisberg, Ruhrhort, etc., and so into Holland.

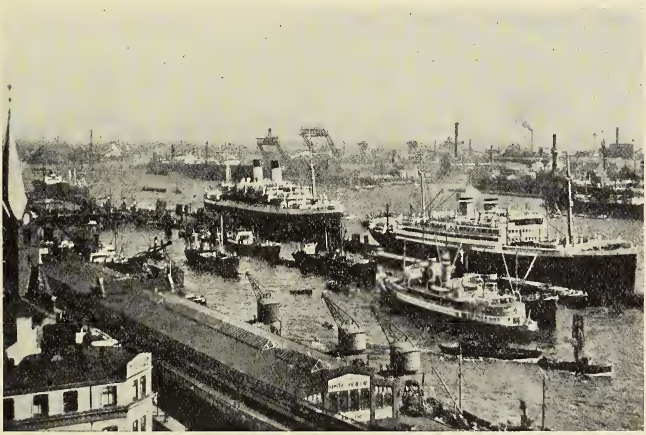
GERMAN PORTS

Nearly two-thirds of Germany's coast line faces the Baltic ; but as this sea is only a " backwater of commerce " and is apt to be frozen in winter, only a small proportion of Germany's foreign trade passes through Baltic ports. Though the North Sea coast of Germany is only short, it faces the busiest sea in the world, is never closed by ice, and receives three great rivers—the Ems, the Weser and the Elbe.

Here, therefore, the great bulk of Germany's foreign commerce is concentrated.

Hamburg conducts more than half of the foreign trade of Germany. It is situated at the head of ocean navigation of the Elbe, at the point where firm land on each side of the river provided the lowest crossing-place. The Elbe itself, though not nearly so great a commercial highway as the Rhine, is navigable up to Prague in Czechoslovakia, and is also linked by canals to other German rivers. The bulk of Hamburg's imports consists of raw materials such as wool and cotton, and foodstuffs such as wheat, meat and tropical produce. The chief exports are manufactured goods such as textiles, iron and steel goods, and machinery.

Bremen, on the estuary of the Weser, resembles Hamburg in that it is situated at the head of ocean navigation of the river, and at the lowest bridge-point. Though the channel has been deepened, the largest ocean vessels cannot reach Bremen, so an outport, Bremerhaven, has been constructed at the mouth of the river. Bremen is the second port of Germany, but its trade is only one-fifth of that of Hamburg. It is, however, the leading port for the importation of cotton, rice and tobacco.



(*German Rys. Inform. Bureau*)

FIG. 102.—THE PORT OF HAMBURG

Stettin, the chief Baltic port of Germany, has the advantage of being the nearest port to the capital, but its trade is rather less than that of Bremen.

Other Baltic ports are *Kiel*, *Lubeck* and *Konigsberg*.

EXERCISES

1. On an outline map of Germany mark the coalfields and show the amount of coal produced in each by a rectangle drawn to scale.

Coalfield :	Ruhr.	Up. Silesia.	L. Silesia.	Saxony.
Production (million tons)	110	20	5	4

2. Germany imports iron ore from Sweden, France, Spain and Algeria. Draw a sketch-map showing these countries and the routes by which the ore is likely to be sent to Germany.

3. Draw a sketch-map to show Berlin as the centre of the railway system of Germany.

4. With the aid of encyclopædias, atlases, travel books, history books and tourist guides, find out all you can about :

(*a*) One German city.
(*b*) One German river.
(*c*) Some German castles.
(*d*) One of the smaller states of Germany.

CHAPTER XV

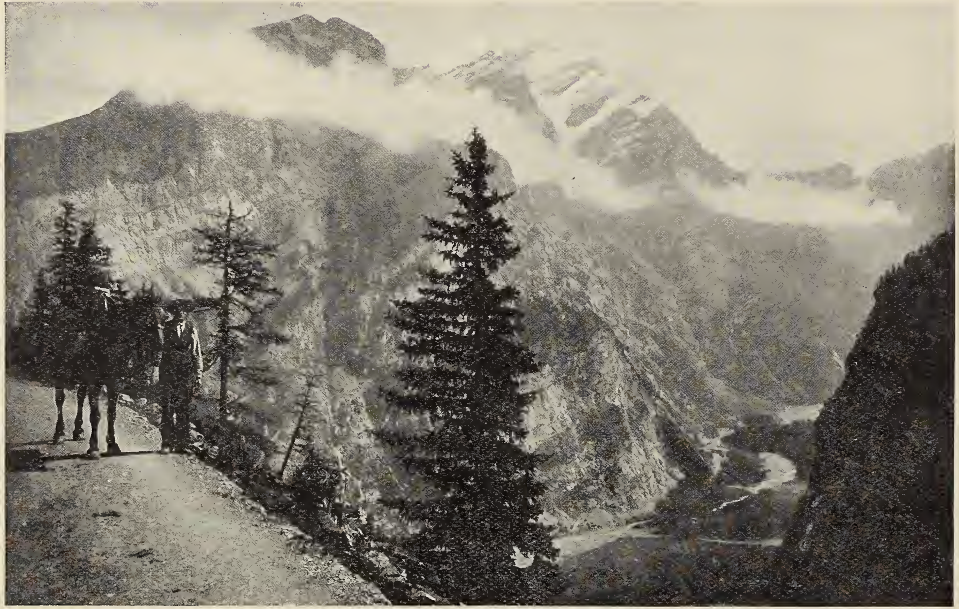
SWITZERLAND

What kind of picture came before your mind's eye when you saw the title of this chapter? Perhaps you " saw " a tin of condensed milk, perhaps a bar of " Swiss " milk chocolate, perhaps a watch " made in Switzerland " ; but most people on hearing or reading the word " Switzerland " see a mental picture of the Alps—magnificent mountains, glistening snowfields, placid lakes, far-leaping waterfalls and slowly moving glaciers. Indeed, though the Alps occupy only about half the surface of the country, it is to them that the country owes its existence and its prosperity.

HOW THE ALPS HAVE HELPED SWITZERLAND

Had there been no mountains there would have been no Switzerland, for the Swiss could hardly have avoided being absorbed by one or other of the four countries which touch her borders. Of course, the mountains did not *make* the Swiss free ; they only gave them the *opportunity* to achieve freedom ; what men do depends on the sort of men they are, as well as on the opportunities they have.

The Alps are also the greatest commercial asset of Switzerland. The " tourist industry " is the most profitable occupation of the Swiss people. A very large proportion of the people—hotel servants, mountain guides, railway men, motor drivers, shopkeepers and farmers—have their wages paid (indirectly) by the tourists who visit the country. Again, numerous waterfalls and rapid mountain streams have been harnessed to provide hydro-electricity with which

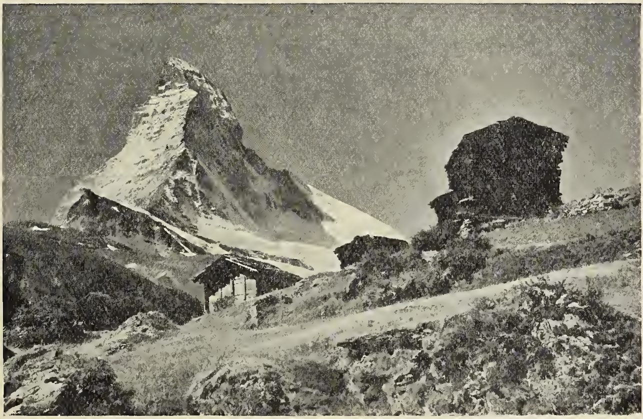


(*E. N. A.*)

FIG. 103.—AN "OVER-DEEPENED" VALLEY IN SWITZERLAND

to run railways and factories, light the streets and houses, and ease the work of the farmer.

Even from the point of view of farming, the mountains are not without advantages. Though a very large proportion of the mountain land is quite unproductive, the valleys and gentler slopes are made more fertile by the mud-laden streams which flow from the snowfields and glaciers. Moreover, on the mountain sides there are usually "shoulders" of nearly level land between the high peaks and the steep sides of the valleys. These "alps," as they are called by the Swiss peasants, are covered with snow in winter, but from June to September they are snow-free, and provide nutritious pasture for cattle which are driven up from the valley farms.



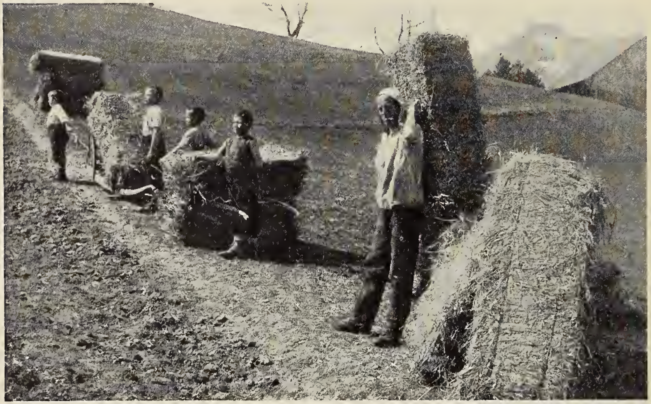
(*Swiss Federal Railways*)

FIG. 104.—THE MATTERHORN

It is, indeed, the "alps" which enable the Alpine farmers to produce a large surplus of milk, much of which is exported in condensed form.

THE SWISS PLATEAU

To the north of the Alps, and stretching from Lake Geneva to Lake Constance, is a plateau formed chiefly of sandstone. Ages ago the area occupied by this plateau was an inland sea, into which rivers from the Alps poured huge quantities of sand and mud. These deposits gradually filled up the sea and were themselves converted into solid rock. Thus even this non-Alpine part of Switzerland really owes its origin to the Alps.



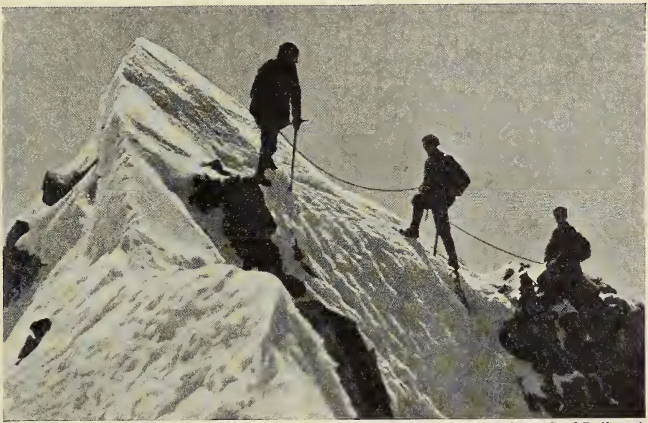
(*Swiss Federal Railways*)

FIG. 105.—TAKING HOME THE HAY

Although the soil of the Swiss plateau is not so fertile as that of some of the mountain valleys, nearly all of it can be farmed in one way or another. Meadow grass, barley, oats, rye and potatoes are the chief crops and dairying is an important industry. This region has also many busy manufacturing towns, and is by far the most densely peopled part of Switzerland.

THE JURA

These mountains are situated along the north-eastern border of Switzerland, between the Rhone and the Rhine. They are composed mainly of limestone, which, as we have seen, does not usually produce good soil. Arable land is restricted to the valley floors, and the mountain slopes are generally devoted to the pasturing of cattle, sheep and goats. In many parts, however, there are valuable forests, and lumbering is one of the chief occupations of the people.



(*Swiss Federal Railways*)

FIG. 106.—CONQUEST !

SWITZERLAND AS A MANUFACTURING COUNTRY

We so often see pictures of Swiss pastures that we are apt to assume that the chief occupation of the Swiss people is farming. This is quite wrong, for there are nearly twice as many Swiss people employed in factories as there are working on the farms, and Switzerland is one of the most highly industrialised countries in the world. Yet she lacks most of the advantages possessed by other manufacturing countries : she produces no coal, practically no mineral ores and no raw materials, except timber ; she has neither seacoast nor navigable rivers ; and she has no colonies to provide a market for her goods. Yet she has certain advantages which outweigh these disadvantages—abundant water power, a fine system of railways, and people with mechanical skill and inventive brains. Even the Swiss love of liberty has proved a commercial asset, for in times past skilled workmen who were persecuted by their own countrymen for their religious beliefs settled in Switzerland, and established industries there. It was in this way, for example,

(Photo by Meisser) *(Swiss Federal Railways)*

FIG. 107.—A SWISS VILLAGE (SEDRUN)

that watch-making and silk manufacture were introduced by French and Italian refugees.

It is interesting to notice, too, that the Swiss manufacturers specialise in the production of articles which require much labour and skill in proportion to the weight of raw material. How many watches, for example, could be made from a ton of metal? What would be the value of the fine lace which could be made from a ton of cotton? How many times as valuable is a good lens as the raw materials from which the glass is made? Think, too, how small the cost of transport of either raw material or finished products will be in proportion to the value of the articles. When we buy such products we are paying chiefly for the skill of the workmen. Indeed, it may be said that the Swiss workmen live by exporting their mechanical skill.

Watch-making is carried on chiefly in the Jura district. Formerly most of the work was done in the homes of the people, but now it is almost entirely done in factories. Every year about twenty million watches, in addition to clocks and parts of watches, are exported, most of them to U.S.A. and Great Britain.

Silk manufacture is centred chiefly in Zurich.

Engineering is another industry which thrives by specialisation—electrical apparatus, textile machinery and rack-and-pinion locomotives being characteristic products.

THE TOWNS OF SWITZERLAND

Berne is the capital of Switzerland. It is situated within a great loop on the river Aar, and being near the centre of the country is the most convenient point for the seat of government.

Zurich, the largest city of Switzerland, is situated on the lake of the same name. Besides being a great tourist centre, it is the chief commercial city of Switzerland.

Lucerne, beautifully situated on the Lake of the Four Cantons, is one of the chief tourist centres ; and **St. Gall** is the principal centre of the manufacture of cotton goods. **Geneva,** at the foot of the lake of the same name, is the home of international organisations, such as the League of Nations and the Red Cross. **Basle,** the second largest town in Switzerland, is situated at one of the great cross-roads of Europe. From it routes diverge northward via the Rhine valley to Holland, southward across the Swiss Plateau to Italy, westward through the Burgundian Gate to France, and eastward via the Rhine to Lake Constance.

EXERCISES

1. Prepare a " lecturette " on one of the following topics :

(*a*) What I should expect to see in Switzerland.

(*b*) The work of ice.

(*c*) The autobiography of a tin of condensed milk or of a bar of " Swiss-milk " chocolate.

(*d*) Watches and watch-making.

(*e*) Electricity in the service of man.

2. The chief commodities exported from Switzerland are : silk goods, clocks, watches, machinery, and animal food substances. Write a short account of the production of each of these.

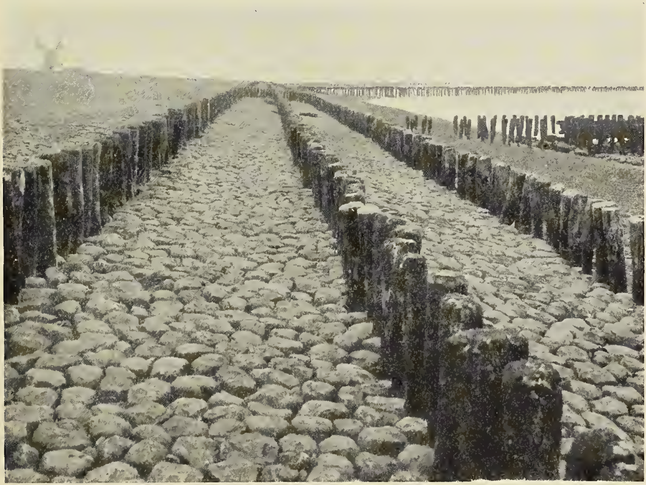
3. Compare Switzerland and Norway from the points of view of—relief of the land, occupations of the people, and foreign trade.

4. Switzerland has a slightly greater density of population than Denmark. Give reasons for this.

CHAPTER XVI

THE NETHERLANDS (HOLLAND)

When we think of Holland we think also of windmills, canals, dykes, cheese, bulbs, of wide-trousered fishermen, and, perhaps, of famous Dutch admirals and navigators.



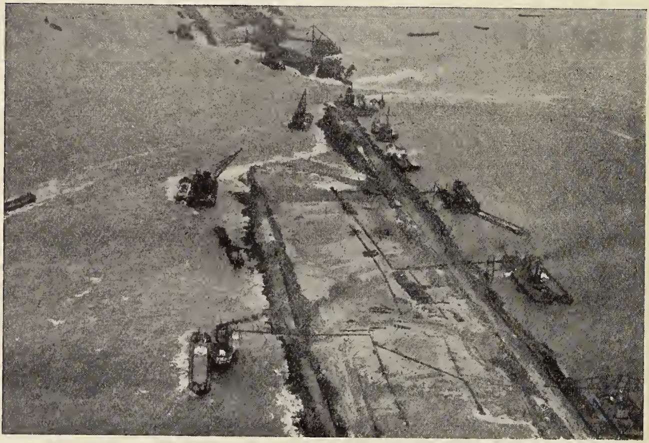
(Publishers' Photo Service)

Fig. 108.—A DUTCH DYKE

Each of these mental pictures has much to tell us about the geography of the country ; indeed, a study of Holland might quite well be based on a collection of typical scenes and products.

HOW NATURE AND MAN MADE HOLLAND

Windmills, dykes and canals are characteristic of Holland because so much of the land is below sea-level. The windmills pump the water from the low-lying fields, the dykes keep out the sea and the rivers, and the canals carry the surplus water out to sea. When Nature made Holland she dumped down mud from the Rhine in the south and west, and sand from the melting glaciers in the north and east, leaving one half of the land swampy and the other half so infertile that man could make little use of it. But Nature's handiwork was not good enough for the Dutch, and by centuries of patient effort they have driven out the sea, confined the rivers between high banks, fertilised sterile sands and made a homeland from Nature's rubbish heaps.



(Vereeniging Nederland in dem Vreemde)

FIG. 109.—BUILDING THE GREAT DYKE FROM WIERINGEN TO FRIESLAND

One of their greatest achievements was the draining of Haarlem Mere, which had an area of seventy square miles and was so deep that the Dutch and Spanish fleets fought naval battles on it in the seventeenth century. In 1848 a

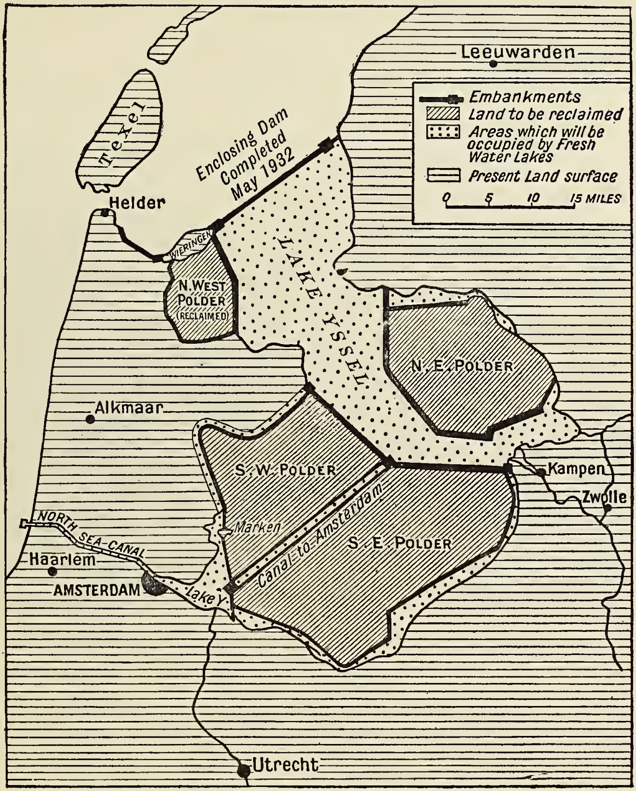


FIG. 110.—THE RECLAMATION OF THE ZUYDER ZEE

great dyke was constructed round the lake, and outside this was a high-level canal into which the water was pumped by means of steam engines. By 1852 the lake was pumped dry, and its bed now forms one of the most productive farming districts of Europe.

Though the Dutch have reclaimed over four hundred square miles of land from the sea during the last hundred years, there is still not enough land for all the people who want to be farmers. Faced by this demand for land and confident in the experience gained by centuries of successful strife with the water, the Dutch have embarked on the most ambitious scheme of land reclamation which has ever been attempted. Dykes are being built across the Zuyder Zee,

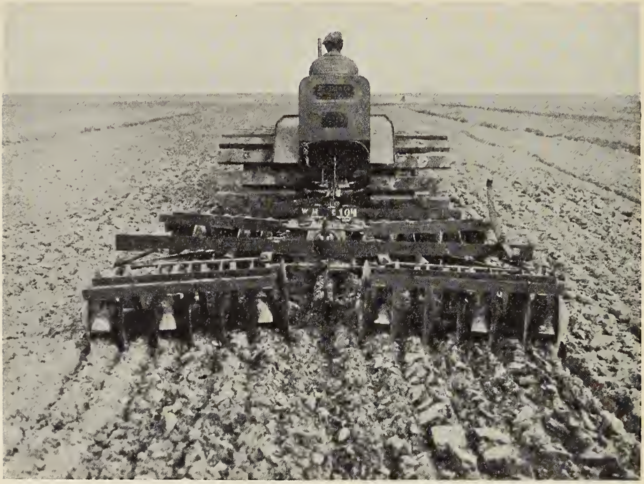

(*Vereeniging Nederland in dem Vreemde*)

FIG. 111.—HARROWING IN THE N.W. POLDER RECENTLY RECLAIMED FROM THE ZUYDER ZEE

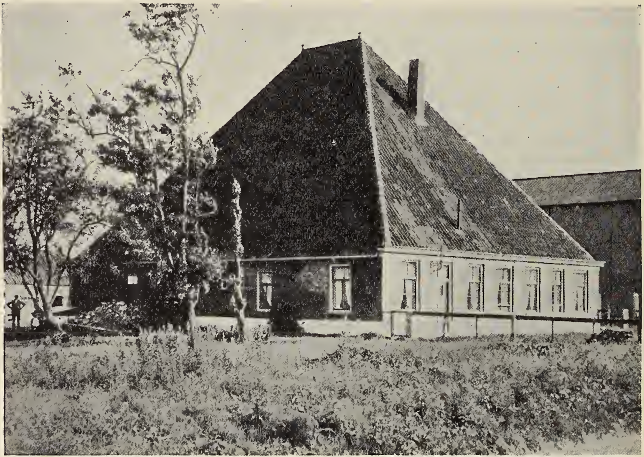
and more than a million acres of the sea bed are to be pumped dry and converted into fertile farms. The pumps will not be worked by windmills, but by oil or steam engines, since these are much more dependable ; indeed, all over Holland the windmills are being replaced by these more efficient sources of power. As shown in fig. 110, the reclaimed land will consist of four "polders," each enclosed by a great dyke, and partially surrounded by a canal, which will carry away the water that must be continuously pumped from the low-lying fields. The north-western polder has already been reclaimed, and is now producing crops.

DUTCH FARMERS

The product which we most frequently associate with Holland—Dutch cheese—is a symbol of the use to which Holland puts the greater part of her land, for dairy-farming is the chief industry of Holland, as it is of Denmark. There are, however, certain differences between the dairy-farming industries of the two countries. Though they have about the same number of cattle per square mile, Holland has three times as many people as Denmark, and so is able to export only about a third as much dairy produce as the latter country. Again, while Danish dairy farmers specialise in the production of butter, Dutch farmers turn most of their milk into cheese. At **Alkmaar,** in North Holland, half a million pounds weight of cheese is sold in the market-place every week. A great deal of this is eventually exported to Britain.

Dutch dairy farms are models of neatness and cleanliness. The cowsheds are paved with tiles, and are kept so spotlessly clean that until fairly recently it was customary for the Dutch, who were always noted for their hatred of dirt, to use one end as a living-room. Even now the windows of the sheds are frequently shaded with lace curtains and decorated with geraniums.

Dutch bulbs are the symbol of another characteristic farming industry of Holland. Bulb culture was a hobby of rich Dutch merchants in the sixteenth and seventeenth centuries, and fabulous prices were paid for new and rare specimens. The craze died suddenly and many wealthy dealers were ruined ; but the Dutch gardeners had become masters of the art of bulb culture and continued to find markets for moderately priced bulbs. To-day the annual production of bulbs, tulips, daffodils, narcissi, etc., is said to be worth over three million pounds. The chief centres of the industry are **Haarlem** and **Leiden**. The production of small fruits and early vegetables is also an important Dutch industry, the chief market-gardening area being the Westland district between Hook of Holland and The Hague.

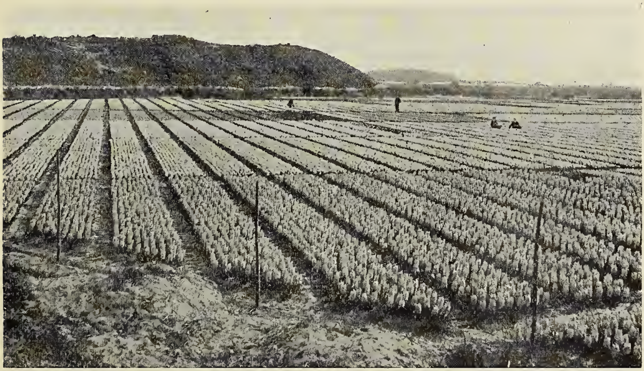


(Vereeniging Nederland in dem Vreemde)

FIG. 112.—FARMHOUSE IN NORTH HOLLAND

FISHING

Everyone is familiar with pictures of Dutch fishermen dressed in wide trousers and ridiculously small waistcoats. It is, however, only in the fishing villages along the shores of the Zuyder Zee that these picturesque costumes are still to be seen. Indeed, they are almost as much of a curiosity in Holland as they would be in England.



(Department of Agriculture, The Hague)

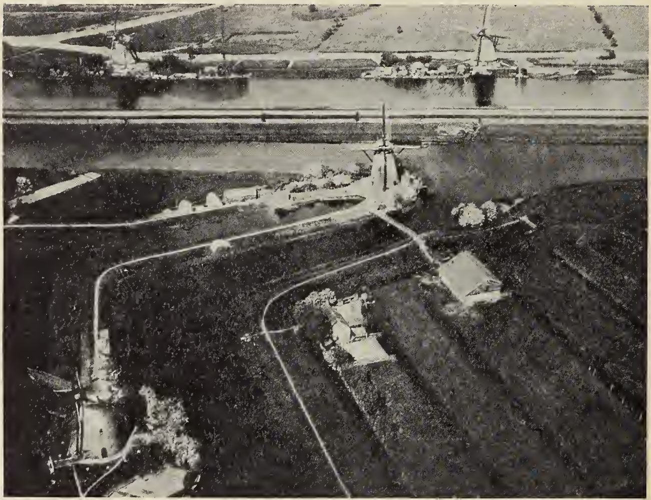
FIG. 113.—BULB FIELDS NEAR HAARLEM

The North Sea fisheries are far more important than those of the Zuyder Zee, and **Ijmuiden** ranks as one of the great fishing ports of the Continent.

THE EASTERN NETHERLANDS

So far we have considered only that part of the Netherlands which lies below sea-level. The eastern half of the country, which lies well above sea-level, is a very different region, but here too the Dutch have had great difficulties to face. The greater part of the surface is covered with infertile sand,

and there are large areas of heather moor and peat-bogs. Canals are first dug to serve the double purpose of transport and drainage. Then the upper layer of peat is removed and laid on one side, while the lower layer is cut up in blocks and sent away on barges to be sold as fuel, and finally the upper layer of peat is worked into the sandy subsoil, along with large quantities of chemical manures. By this laborious process the Dutch have transformed large areas of bog into fertile fields and productive market gardens.

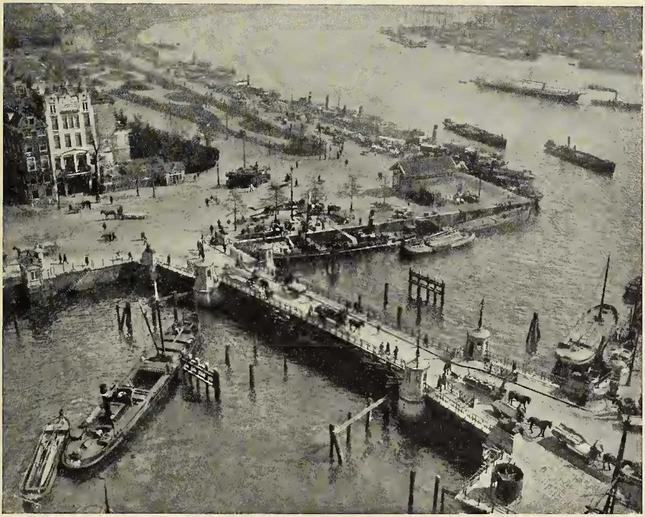


(*N.Y. Vereenigde Fotobureaux*)

FIG. 114.—POLDER LANDSCAPE

MANUFACTURES AND COMMERCE

Although we always think of Holland as a land of farmers, more than half of her people are engaged in manufacturing or in trade. The chief reasons why industries have developed in the country are, firstly, that the land is too small to produce enough for all the people, and, secondly, that Dutch ships bring into the country large quantities of raw material. In recent years, too, coal has been discovered below the sandy soils of the province of Limburg, so Holland is not so dependent on British coal as formerly. One of the greatest of the Dutch industries is the manufacture of margarine, the raw materials—coconut oil, ground nut oil, etc.—being imported chiefly from the Dutch East Indies. Other industries which depend on raw materials from the tropics are the manufacture of soap, sacking, rubber, tobacco,



(Vereeniging in dem Vreemde)

FIG. 115.—ROTTERDAM HARBOUR FROM THE AIR

cocoa and chocolate. Textiles are made at **Utrecht** and near the German border.

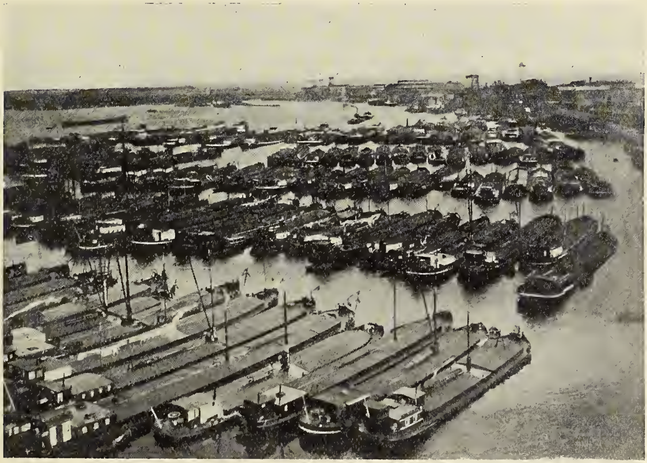
Rotterdam is not only the biggest port of Holland, but is also the second largest port of the Continent, being surpassed only by Antwerp in respect of the number and tonnage of vessels using the port. Besides conducting the greater part of Holland's foreign trade, it also conducts a large share of the trade of Germany and of central Europe generally, in fact three-quarters of the goods entering Rotterdam are sent on to other countries, chiefly by the rivers Rhine and Meuse, or by canals leading from them.

The port owes its importance to its situation at the mouth of the Rhine and its proximity to the Ruhr district and other great industrial areas. Yet had the Dutch relied on its natural advantages alone, the port would now have been a very small one. They have had to wage constant warfare with the mud which chokes the waterways and renders them unnavigable. The New Waterway, by which the largest ocean vessels can reach Rotterdam, is not a natural channel, but a ship canal which was constructed at great expense and in face of great natural difficulties.

Amsterdam, the capital and the second largest port of Holland, is another instance of the way in which the indomitable spirit of the Dutch has enabled them to surmount obstacles.

In the Middle Ages, when ships were small enough to navigate the Zuyder Zee and the channels which then led from it to the Rhine, Amsterdam was the chief port of the country. When vessels became too large to sail the shallow Zuyder Zee, the port was faced with ruin. But the Dutch cut three canals—the *Merwede Canal* to the Rhine, the *North Holland Canal* to the Helder, and the *North Sea Canal* to Ijmuiden. The last-named canal has recently been enlarged and can now accommodate the largest ocean liners.

The city itself is intersected by so many canals that it has been called " The Venice of the North." As it is built on alluvium, which is too soft to provide a firm foundation, all the houses are built on piles, which are driven fifty feet or more into the ground. This is why Amsterdam has been described as " a city whose inhabitants perch upon the tops of trees." Nowadays, however, columns of concrete are used in place of wooden piles.



(*Vereeniging in dem Vreemde*)

FIG. 116.—RHINE BARGES AT THE PORT OF ROTTERDAM

Amsterdam, unlike Rotterdam, is concerned mainly with *Dutch* trade, and does not conduct much commerce on behalf of other countries. Its chief imports are tropical products such as coffee, tea, rubber, cocoa, rice and copra. It is also the chief diamond market in the world.

The Hague ('s Gravenhage), though not the capital of Holland, is the centre at which the business of government is conducted. It differs from other Dutch cities in that it has no canals except on the outskirts, but its stately mansions, spacious gardens and wide streets flanked by magnificent public buildings make it one of the finest cities of Europe.

EXERCISES

1. The most valuable commodities which Great Britain imports from Holland are: margarine, condensed milk, eggs, butter, cheese and garden produce. Give reasons why Holland has a surplus of these commodities.

2. Holland has 2,000 miles of canals and 2,300 miles of railway. Great Britain, which is seven times the size of Holland, has 4,000 miles of canals and 20,000 miles of railway. Account for the differences between the two countries shown by these figures.

3. On squared paper draw a diagram to show the uses made of the land, using the figures given in the following table:

—	Total Area.	Pasture.	Arable.	Forest.	Gardens, etc.	Uncultivated.
10,000's of hectares	326	128	89	25	11	73

4. The total yield of the cereal crops in Holland is, approximately:

Oats.	*Rye.*	*Wheat.*	*Barley.*	
7	5	2	1	(10,000's of hectares).

Give reasons for the relative importance of these crops.

CHAPTER XVII

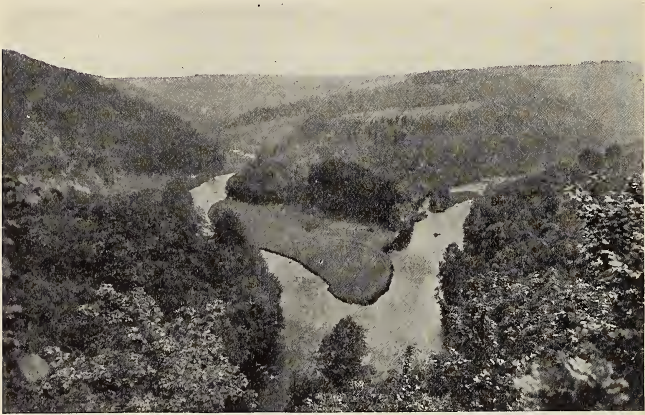
BELGIUM

Belgium consists of two very different types of country—a broad plain in the north and a plateau in the south. The Belgian people also belong to two different types: in the north live the Flemings, who speak a language very similar to Dutch; and in the south are the Walloons, who speak French. The dividing line between the people is, however, not the same as that between the two types of land. The former is an east to west line through Brussels and the latter follows the rivers Sambre and Meuse. This twofold division of the country is seen also in the occupations of the people, for Belgium is outstanding both as a farming country and as a manufacturing country.

THE BELGIAN FARMERS

Belgium contains so many different types of land and soil that methods of farming vary greatly from place to place. Near the coast is a belt of low-lying country which is very similar to the lowlands of Holland. In some parts of the plain the people have such small plots of land that they have to be gardeners rather than farmers. In other parts, where the soil is a heavy clay, there are large farms which specialise in the production of flax, sugar-beet, wheat or oats. On the Dutch border is the sandy *Campine* district, which even Belgian industry has not yet made fertile; and on the plateau of the *Ardennes* large areas are given up to the rearing of cattle, sheep and goats, while other parts of the highland are forest or common pasture.

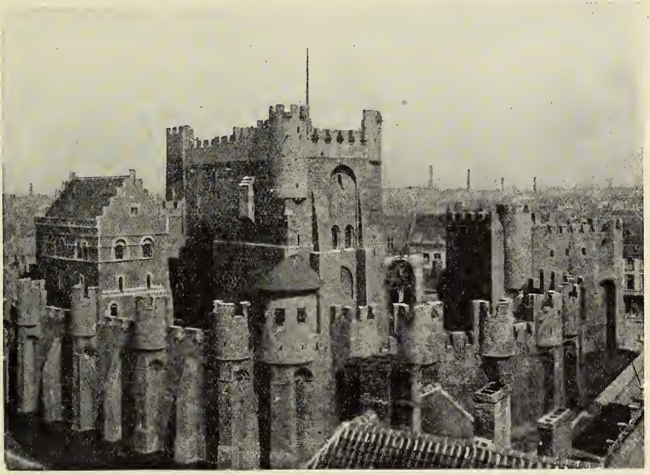
The most remarkable farming district is that north of the rivers Lys and the Scheldt. In its natural state this was one of the most barren districts in Europe. But by careful cultivation and the lavish use of manures it has been transformed into one of the most productive areas in the world. The farms are very small, and nearly all the work is done by the spade or with the hands.



(Belgian National Railways)

FIG. 117.—SCENE IN THE ARDENNES

As in most other European countries, women and children undertake a large share of the farm work, and it is a common sight to see a row of them working their way on hands and knees through a small patch of ground, weeding, hoeing, thinning or tying up the plants. This is especially true of the industrial districts, where the men often work in the factories during the day, and also of western Flanders, where it is the custom for men to go to work in France during the summer, leaving the women to look after the farms. As the farms are small, there are far more houses than would be seen on the same area of farm land in England. "There are many small villages, and far and near among the fields are dotted little cottages, often whitewashed and with red roofs, in which the cultivators live close to their work."[1]



(Belgian National Railways)

FIG. 118.—CASTLE OF THE COUNTS, GHENT

Many different crops—grain, fruit, vegetables, tobacco, etc.—are grown on these small farms, and the country as a whole produces nearly all the meat, dairy-produce, vegetables and fruit her people require. The only staple foodstuff she has to import in large quantities is wheat, for although the yield per acre is nearly the highest in the world, the farmers can spare only enough land to grow half the wheat required by the nation.

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[1] Seebohm Rowntree.

MANUFACTURING IN BELGIUM

Although Belgium is one of the most intensively cultivated countries in Europe, only about one-fifth of the working people are regularly engaged in farming. The majority of the people are engaged in manufacture, mining or commerce ; but a great many of the Belgian industrial workers also possess allotments or small farms on which they work in the evenings, when the factories do not provide full-time employment.

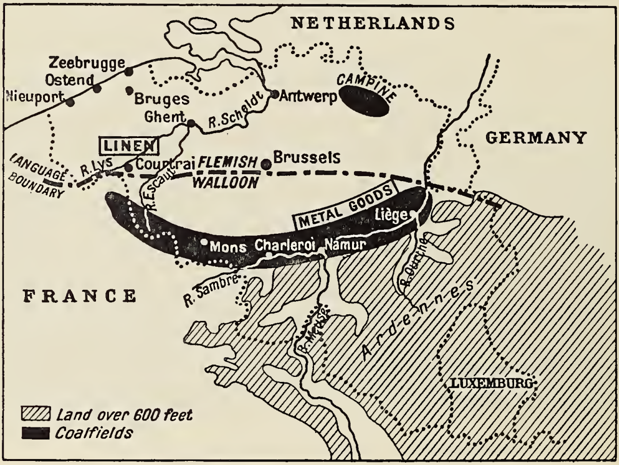


FIG. 119.—BELGIUM

The two outstanding industries of Belgium are the manufacture of textiles and metal goods. Textiles are made chiefly in Flanders. **Courtrai, Tournai,** and other towns in west Flanders specialise in the manufacture of *linen.* Much of the flax used is grown in the surrounding district and retted in the river Lys, whose water possesses some property which makes it particularly suitable for this purpose. **Ghent,** in east Flanders, at the confluence of the Escaut and the Lys, is the chief centre for the manufacture of *cotton goods,* and **Bruges** manufactures *lace.* **Verviers,** on the edge of the Ardennes, is the only great textile town in southern Belgium. It is specially noted for the manufacture of *woollen goods.*

(*Belgian National Railways*)

FIG. 120.—GHENT : THE OLD PORT

Metal goods are manufactured chiefly in the valley of the Meuse. Here is situated the chief coalfield of Belgium (see fig. 119) and formerly much iron ore was mined in the locality. The proximity of coal and iron led to the development of the iron and steel industry, and though nowadays practically all the iron and some of the coke for smelting have to be imported, the industry continues to flourish in the places where it originated. **Liège** is the chief centre of the industry.

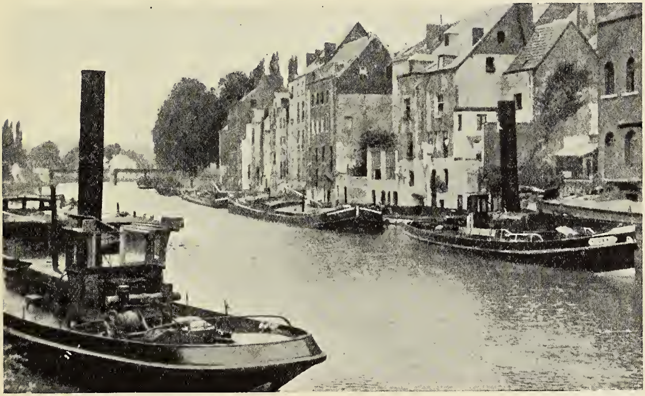
A new industrial region is now being developed in the *Campine* district, near the Dutch border. As in the neighbouring parts of Holland, coal has been discovered far beneath the sandy soil, and several productive pits are now working. A canal which is being built from Antwerp to Liège will pass through the Campine district, and facilitate the importation of raw materials. It is, therefore, certain that the region will shortly develop great industries.

TRANSPORT IN BELGIUM

Belgium was the first country on the Continent to build railways, and to-day there is no country in the world which has such a great length of railway in proportion to her area. In addition to her ordinary railways, Belgium has a close network of "light railways," which connect the villages with each other and with neighbouring towns. They are intermediate in character between tramways and railways; the lines run along the roadside and through the village streets; stations are convenient shops or small sheds; the trains are made up of both passenger coaches and goods wagons, and it is a common sight to see two or three of the latter waiting in the village street to be loaded with garden or farm produce.

The rates for both passengers and goods are much lower than in England—weekly third-class workmen's tickets, for example, cost only a farthing per mile. The cheapness of transport has greatly assisted the development of both farming and manufacturing. The farmer can easily market his produce, the small-holder, who is often also a factory worker, can travel cheaply between the factory and the small farm on which he lives, and the manufacturer can gather together his raw materials and distribute his products more cheaply than in most other countries.

Belgium is also well served by navigable waterways. The Scheldt is navigable for the largest ocean vessels up to Antwerp ; Bruges, Ghent and Brussels are all connected to the sea by ship canal ; and the rivers Scheldt and Meuse, with their tributaries, have been made navigable for large barges, and are themselves connected with each other by numerous canals.



(*J. B. Rycroft*)

FIG. 121.—ON THE SAMBRE AT NAMUR

Belgium is not so fortunate with regard to her coast line. The coast itself is short, it is lined with sand dunes, and the sea is shallow. **Ostend,** situated at a break in the line of sand dunes, is a packet station for Britain, fast steamers plying daily between that port and Dover.

Zeebrugge (Sea Bruges) stands on an artificial harbour at the end of the Bruges ship canal. In the Middle Ages Bruges was one of the greatest ports of Europe, but the inlet on which it stood silted up, and the town is now separated from the sea by ten miles of fertile farm land, all of which has been built up within historic times. **Antwerp** is without rival among the Belgian ports, and is, indeed, the chief port of the Continent. Like Rotterdam it serves other countries in addition to its own. Besides conducting the trade of the industrial regions of the Meuse valley of east and west Flanders, it serves the Ruhr basin, the Rhine valley, and western France.

Brussels, the capital of Belgium, is situated in the centre of the Belgian plain, midway between the coast and the industrial district of the Meuse valley, and almost on the dividing line between the Walloons and the Flemings. It is the centre of the railway system of the country, and like most capital cities it specialises in the manufacture of foodstuffs, clothing, jewellery and "luxury" articles. It is one of the richest and most finely built cities of Europe, and seems, indeed, almost too magnificent for the size of the country.

EXERCISES

1. Consider the following table :

—	Belgium.	Netherlands.	Denmark.	Great Britain.
Area (thousands of square miles) ..	11·7	12·6	16·5	89
Population (millions)	8	7·7	3·6	44·5
Population per square mile	683	611	218	500

Write down the chief differences between the four countries shown by these figures. Account for the differences in the density of population.

2. For every 1,000 people in the country there are in Belgium 220 cattle, in Holland 300 cattle, and in Denmark 830 cattle.

Give reasons for these differences and state briefly what light they throw on the occupations of the people.

3. Draw sketch-maps to show: (*a*) Brussels as the centre of the railway centre of Belgium; (*b*) the land area served by the port of Antwerp; (*c*) Belgium as a "buffer state."

CHAPTER XVIII

FRANCE

It is convenient to study France last among the countries of Europe, since it possesses many features which are characteristic of various parts of the Continent. In the north-east the Great Plain of Europe runs out to sea at the Straits of Dover ; in the middle of the country is the Central Plateau, which is a hard, old block similar to the Meseta and the plateau of Bohemia ; around Paris and Bordeaux are great " basins " similar to the London basin ; Brittany resembles in many ways Cornwall and the north-western corner of Spain ; and the Alps and the Pyrenees are part of the great fold-mountain system of Europe.

Moreover, since France spans the Continent from the Atlantic to the Mediterranean, it has three different types of climate, each of which is characteristic of certain parts of the Continent. The north-west has the mild, moist, equable *West European* type ; the south-east has the hot, dry summers characteristic of the *Mediterranean* region ; and in the eastern districts the cold winters mark a transition to the more extreme climate of the *Continental Interior*.

Corresponding to these differences in climate are differences in the cultivated crops and in the methods of farming. The north and north-west grow the same crops as we do in southern England ; the south-east is the land of fruit and wine and olive oil, like the neighbouring Mediterranean countries ; and in the east farm life is very similar to that of southern and central Germany. Even when we consider the proportion of the people engaged in farming and in manufacture, we find that France is a fairly good summary of the geography of Europe, for she has far more farmers than have the great industrial countries like Britain and Germany,

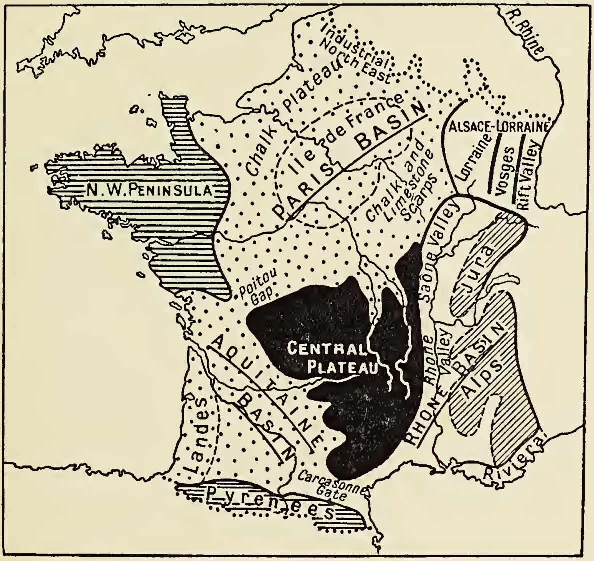


FIG. 122.—FRANCE: NATURAL REGIONS

and far more factory workers than the agricultural countries like Denmark and Hungary.

THE FRENCH FARMERS

Nearly half the people of France are engaged in farming, and most of the peasants own their farms, so there are few large landowners, and few agricultural labourers. Even the people who live and work in the towns frequently send their children into the country to stay with their grandparents during their schooldays, and they themselves look forward to the time when they will be able to retire and carry on the little farm. This close link between town and country is a source of great strength to France.

Nearly all the French farms are small, and are generally made up of several scattered plots. The great sub-division of the land is due to the inheritance laws, which decree that when a man dies his possessions must be equally divided among his children. Many of the plots are too small to be worked economically, and in any case much time is lost by travelling from one plot to another; consequently attempts are being made in various parts of France to persuade the peasants to arrange exchanges of land in order to reduce the number of individual plots.

Another characteristic of rural France is the large number of vegetable gardens. " It would be difficult for the French countryman to conceive a house without a garden. A strip of land goes with the cottage as a matter of course, and in it the countryman grows potatoes and peas and cabbages and carrots. If he requires a bigger plot, he can, as a rule, rent it without difficulty at a reasonable price. The men of my village are employed in various trades, but whatever their occupation they can always find time to dig a piece of ground for themselves, and they would not dream of buying salads and fruit and eggs."[1]

Though the French people are passionately fond of the land, the French countryside usually lacks the beauty and variety of the English landscape. In contrast to the shady lanes and leafy hedges of rural England, the French roads are straight and dreary, and there are few hedges, footpaths, or shady trees. Nearly all the farmhouses are grouped in small villages, probably because the village is the only

[1] S. Huddleston, *Between the River and the Hills.*

point from which the peasant can conveniently reach his scattered plots.

The villages themselves are usually much less picturesque than English rural hamlets ; flower gardens are rarely seen, and the farmhouses which are ranged on each side of the village street either turn their backs to it or are separated from it by outbuildings.

The farmyards, round which the main buildings are grouped, are hidden from view by large wooden or iron gates, suggestive both of the former need for defence and of the strong individualism of the French peasant. The living accommodation and the household furniture do not suggest a high degree of prosperity. But "the French peasant farmer, in spite of his aspect of poverty, is rich. He has no desire to look prosperous. He merely wants to be prosperous ; and he is, in spite of all appearances."[1]

NATURAL DIVISIONS OF FRANCE

Fig. 122 shows how France may be divided into natural regions, in each of which the climate, land surface, natural vegetation and cultivated crops differ from those of other regions.

Brittany

This peninsula is composed chiefly of ridges of granite and other hard rocks which represent the last remnants of a range of mountains which, hundreds of millions of years ago, stretched from south-western Ireland through South Wales, Cornwall and Brittany to the Central Plateau of France. Granite ridges form barren moorlands, between which are situated deep, fertile valleys and secluded basins. The scanty farm land is divided into numerous little fields, each surrounded by high walls of granite or turf, above which rise straggly wind-clipped bushes and trees which protect the crops from the full force of the Atlantic gales.

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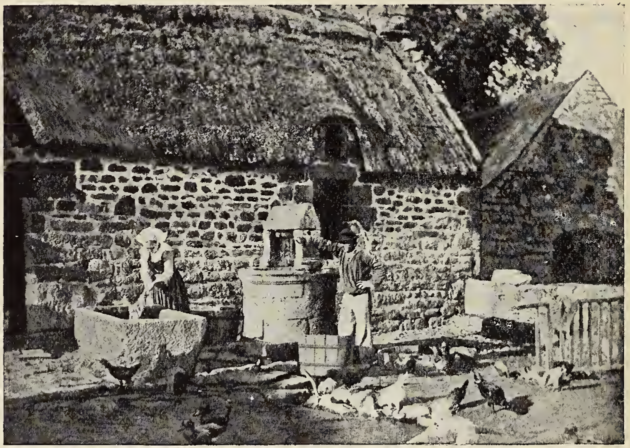
[1] Philip Carr, *The French at Home.*

Grass is the chief field crop, for the westerly winds from the Atlantic make the climate mild and moist ; consequently dairying is an important industry, and the Breton peasants have a surplus of butter and cheese for export.

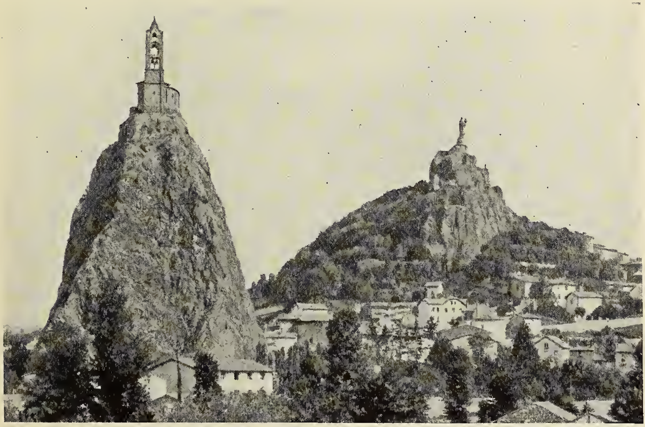


(*E. N. A.*)

FIG. 123.—A FARMYARD IN BRITTANY

The characteristic drink of the people, cider, is represented by numerous apple orchards which, particularly in spring, add great charm to the rural scene. The most valuable crop, though not the one occupying most space, are the vegetables, which the peasant has found he can sell at a good price since the mild winters and early springs enable him to produce them much earlier than we can in England.

The coast itself is deeply indented by many bays formed by the subsidence of the land in bygone ages. As in other countries, where fertile land is scarce and there are many good harbours, fishing has become an important industry. The chief fish caught in the home waters are sardines, which are tinned for export. Many Breton fishermen also participate in the cod and herring fisheries of Iceland and Newfoundland.



(*Donald McLeish*)

FIG. 124.—ANCIENT VOLCANIC PEAKS AT LE PUY

The Central Plateau

Like Brittany this region is composed mainly of granite and other hard, old rocks. In the more elevated regions the soil is thin and infertile and the winters are long and cold. The farms are small, and every tiny patch of fertile alluvial soil is carefully cultivated to yield such cool-weather crops as rye, oats and potatoes. Although the peasant and his family work hard from dawn to dark they cannot wring a sufficient livelihood from their farms alone, and many of the men migrate temporarily to Paris and other cities in order to earn extra money.

The central and the south-western parts of this plateau are specially interesting from the point of view of physical geography. In the centre are many *puys*, or ancient volcanoes, which stand up as great cones above the general level of the plateau. The ashes and dust which were thrown out from these volcanoes ages ago now make very fertile soil, so the volcanic district is much more densely peopled than the rest of the plateau.

In the south-west the plateau is fringed by a belt of limestone, which forms the high, barren district known as the *Causses*. All the rain which falls sinks quickly through the limestone, so that the surface of the plateau is practically waterless. The rivers run through deep gorges, like that of the Tarn, which is thirty miles long and nearly two thousand feet deep. Sheep and goats are reared on the plateau, and from their milk the famous Roquefort cheese is made.

South-Western France

This region, situated between the Central Plateau, the Pyrenees and the Bay of Biscay, is a " basin " which has been partially filled by sediments which now form sandstone, limestone or fertile alluvial soil. As might be expected from the position of the basin, its climate is midway between the north-west European type and the Mediterranean type. It has rain in all seasons, but the weather is always warm and sunny, consequently a great variety of crops can be grown, and the peasants' life is easier than in most parts of France.

The chief " money crop " of the region is the vine. The Medoc peninsula is especially noted for wine and the valley

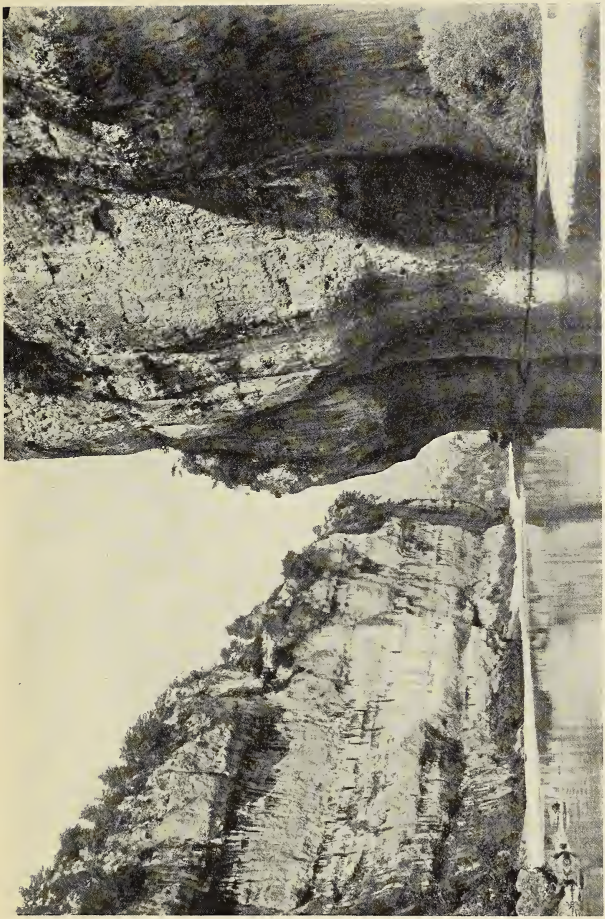


FIG. 125.—GORGE OF THE TARN

(Courtesy of the O.F.T.)

of the Charente for brandy, which is distilled from grape-juice.

South of the Medoc peninsula is the sandy district known as the *Landes*. Formerly this was a desolate waste, supporting only scanty flocks of sheep, which were guarded by shepherds on stilts. A large part of the land has, however, been planted with pine trees, which provide both timber and turpentine.

The Rhone-Saône Valley

The lower part of this valley and the plains on each side of the delta are often called " Mediterranean " France. This is not simply because they are on the shores of the Mediterranean Sea, but also because they have the hot, dry summers characteristic of Mediterranean countries and because the people live and work in pretty much the same way as other Mediterranean peoples.

The chief crops are wheat, maize, grapes, olives, mulberry, beans and vegetables, and there is the same laborious cultivation of small farms which is seen in Italy and in south-eastern Spain.

It must not be assumed, however, that this region always enjoys warmth and sunshine. In winter it is often bitterly cold, especially when the *mistral* blows down the valley from the Alps. This wind is so harmful to crops that the fields have to be sheltered by lines of trees or by lattice-work fences. It is largely because of the shelter from cold winds afforded by the Alps that the coastal region known as the *Riviera* has the warm, sunny weather for which it is so famous.

As we pass northward along the valley of the Saône the climate becomes more " continental " in character, and there is more rain in summer. The typical Mediterranean trees, such as the olive, the walnut and the mulberry, do not flourish north of Lyons, though vines are cultivated in the northern half as well as in the south.

The *Côte d'Or* is a limestone escarpment specially noted for the production of Burgundy wine.

Corsica

This island is composed of hard, old rock, comparable to the Italian island of Sardinia.

A large part of the surface is covered with scrubby vegetation and sweet-smelling shrubs which are known collectively as the *maquis*. The scent of the maquis spreads far out to sea, and has earned for Corsica the name of " The Scented Isle."

Most of the people are pastoral farmers, who tend cattle, sheep and goats, but wheat, vines and olives are cultivated on the more fertile lands.

The chief towns are *Ajaccio*, the capital and the birthplace of Napoleon, and *Bastia*, the chief port.

Eastern France

This region, between the Rhine and the Seine, is one of great variety, and we can select only two particularly interesting portions of it :

(*a*) East of the Vosges is the *Rift Valley* of the Rhine. The lowland near the Rhine itself is infertile, but the land between the river Ill and the foot of the Vosges is among the richest farming regions in the world, being covered with a deep fertile soil somewhat similar to the loess of China. The chief crops grown are wheat, hops, tobacco, fruit and vegetables. The lower slopes of the Vosges are terraced for vines, above which are forests which provide much timber.

(*b*) *Champagne*. This is the district around the head-waters of the Seine and its tributaries. It is built of layers of limestone and chalk, which form escarpments with clay vales between them. The valleys are good cattle-lands, and the summits of the ridges are largely given up to sheep. The slopes of the escarpments, especially those facing south-east, are terraced with vineyards which produce the famous champagne wine.

(*Courtesy of the O.F.T.*)

FIG. 126.—SCENE IN THE VOSGES

The Paris Basin

The limestone and chalk which form the hills of Champagne dip down under Paris, and reappear on the other side of the Seine, thus forming a " basin " which has been partly filled with newer rocks. Within this basin the French distinguish several districts or " pays," each characterised by particular types of rock, soil or cultivation. Thus, *Beauce* is a low plateau between the Seine and the Loire, noted specially for wheat and sheep, while the district of *Brie*, between the Seine and the Marne, specialises in the cultivation of sugar-beet. The districts immediately surrounding Paris specialise in the cultivation of market-garden produce for the city markets.

MANUFACTURING IN FRANCE

The manufacturing districts of France are much more scattered than those of Britain or Germany. This is because her coalfields are small and far apart, so that many industries have grown up at the ports where coal and raw materials can easily be imported. The following are the chief industrial areas :

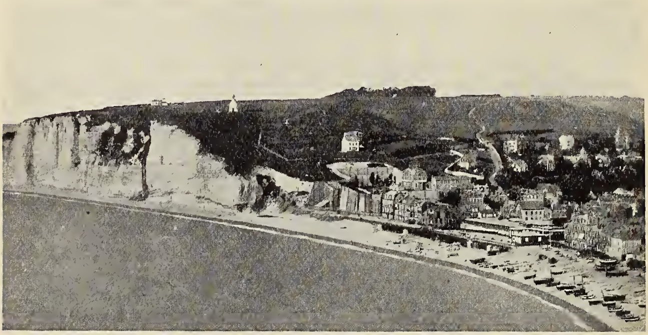
(1) **The North-East.**—The Meuse valley coalfield of Belgium extends into France around Lille. Many of the mines were badly damaged during the war, but they have been re-equipped with up-to-date machinery and now produce most of the coal mined in the country. The region manufactures cottons, woollens, linen, artificial silk, textile machinery and sugar. With the exception of sugar-beet, which is widely grown in the surrounding districts, most of the raw materials for these industries have to be imported through the ports of Havre, Rouen and Dunkirk.

Lille is the greatest industrial centre, but *Valenciennes*, *Cambrai*, *St. Quentin* and *Amiens* all specialise in one or more of the above-mentioned industries.

Rouen has many cotton factories, which depend on imports of both coal and raw material.

(2) **Alsace-Lorraine.**—Lorraine possesses the largest iron-field in Europe, and produces 40 per cent. of all the iron ore mined on the Continent. As there is little good coking coal near at hand, this has to be brought from the Ruhr district.

Much iron ore is sent to the Ruhr as return cargo, so the two regions, though in separate countries, are to a large extent dependent on each other. The chief smelting and metal manufacturing towns of Lorraine are *Nancy*, *Epinal* and *Toul*. In addition to the ironfield Lorraine has deposits of salt, which have given rise to chemical and glass industries. On both sides of the Vosges cotton manufacturing is carried on, in Lorraine at *Epinal* and *St. Die*, and in Alsace at *Belfort* and *Mulhouse*. Electricity, generated by the rapid streams of the Vosges, is largely used for driving the machinery.



(*Courtesy of the O.F.T.*)

FIG. 127.—CHALK CLIFFS OF NORTH-EAST FRANCE

(3) **The Rhone Valley.**—*Lyons*, situated at the confluence of the Rhone and the Saône, is the chief centre of the silk industry. A good deal of raw silk is grown in the Rhone valley, but much has also to be imported from China and Japan. An interesting feature of the industry is that it is carried on, not so much in great factories in Lyons itself, as in small factories and even in the homes of the people in the surrounding rural districts. Had it not been for the introduction of hydro-electricity, which is generated in Alpine

valleys, it is quite probable that most of these small factories and home workshops would have ceased to exist ; as it is, electrical power enables them to produce goods as cheaply as the larger factories.

St. Etienne, situated on a small coalfield near the edge of the Central Plateau, manufactures silk ribbons and metal goods.

Le Creuzot, also situated on a small coalfield, specialises in the manufacture of cannon, shells and armaments of all kinds. Marseilles manufactures soap, candles and margarine, the raw materials being imported mainly from tropical regions.

THE FRENCH PORTS

Marseilles is situated a little to the east of the delta of the Rhone, on a fine harbour, which is within easy reach of the Rhone valley. It has been an important port from Phœnician times, and in modern times has gained great advantage from the construction of the Suez Canal and the development of French colonies in northern Africa. A canal has recently been cut from the port, through a four-mile tunnel to the Etang de Berre, which has thus become a kind of inner harbour for Marseilles. The Etang will eventually be connected by canal with the Rhone, which itself will be made navigable for large barges. When the whole scheme is complete there will be a continuous navigable waterway from Rotterdam, via the rivers Rhine, Saône and Rhone, to Marseilles.

Rouen, the second port of France, is situated at the head of ocean navigation of the Seine. It serves especially the Paris basin and the industrial north-east. Its chief imports are foodstuffs, raw materials and coal. It is also one of the chief centres of the cotton industry.

Le Havre, situated at the mouth of the Seine, is the great rival of Rouen. It is an important passenger port and has large imports of wheat, cotton and coal.

Bordeaux is the great port of south-western France. It is situated near the centre of the " basin " of Aquitaine, at the head of ocean navigation of the Gironde, and at the lowest bridge-point of the Garonne. It exports wine and fruit, and imports flour, sugar, cocoa and coffee.

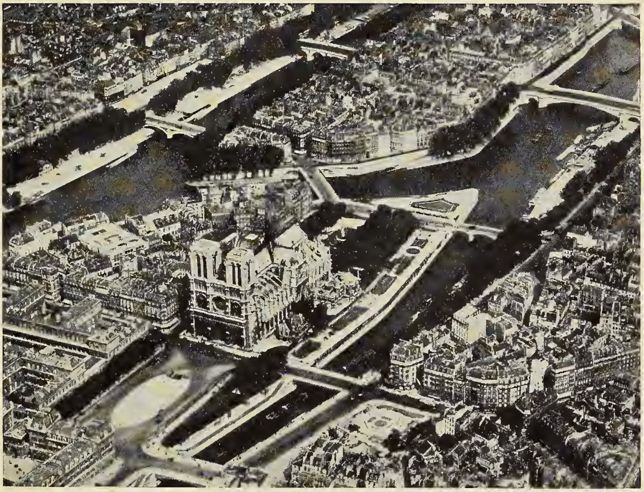
Nantes is situated at the head of the Loire estuary, but suffers as a port from the shallowness of the channel, which prevents large vessels reaching the city. These are, however, accommodated at the outport, St. Nazaire.

Strasbourg, though an inland town, is one of the chief ports of France. This is because it is at the head of barge navigation of the Rhine, and at the terminus of both the Rhine-Rhone Canal and the Rhine-Marne Canal. Its chief imports are coal, wheat and petroleum, and its exports chemicals and iron ore from Alsace and Lorraine.

PARIS

More than two thousand years ago a half-savage tribe known as the Parisii built a fortified village on a small island in the Seine. When the Romans conquered Gaul they replaced the native village by a Roman fortress, around which a city grew up. After the downfall of the Roman Empire, Paris, as the city was then called, became the capital of the West Franks. In the tenth century the Duke of Paris was chosen as king of all the Franks. But Paris was not yet the capital of France, for the Franks were divided into several independent groups, each ruled by its own duke or prince. By the sixteenth century, however, Paris had become the governing centre of the whole country, and during the last few centuries the rulers of France have done everything in their power to increase the importance of the capital. All the main roads, railways and canals were made to converge on Paris, so that it could more easily control every part of the country, and the provincial districts of France are much more dependent on Paris than are those of Britain on London.

Besides being the centre of government, justice, art and fashion, Paris is a great manufacturing city. Like most capitals it specialises in the preparation of foodstuffs and the manufacture of clothing, furniture, jewellery and various " luxury " articles.



(*Courtesy of the O.F.T.*)

FIG. 128.—AERIAL VIEW OF THE CENTRE OF PARIS

EXERCISES

1. Draw a sketch-map to show Paris as the centre of the railway system of France.

2. Compare Brittany and the Rhone-Saône valley with regard to the climates and the occupations of the people.

3. The chief exports of France are : Textiles, iron and steel, chemicals and wine. Write a short note about the production in France of each of these commodities.

4. Draw sketch-maps to show why *Bordeaux*, *Strasbourg* and *Marseilles* have become important.

CHAPTER XIX

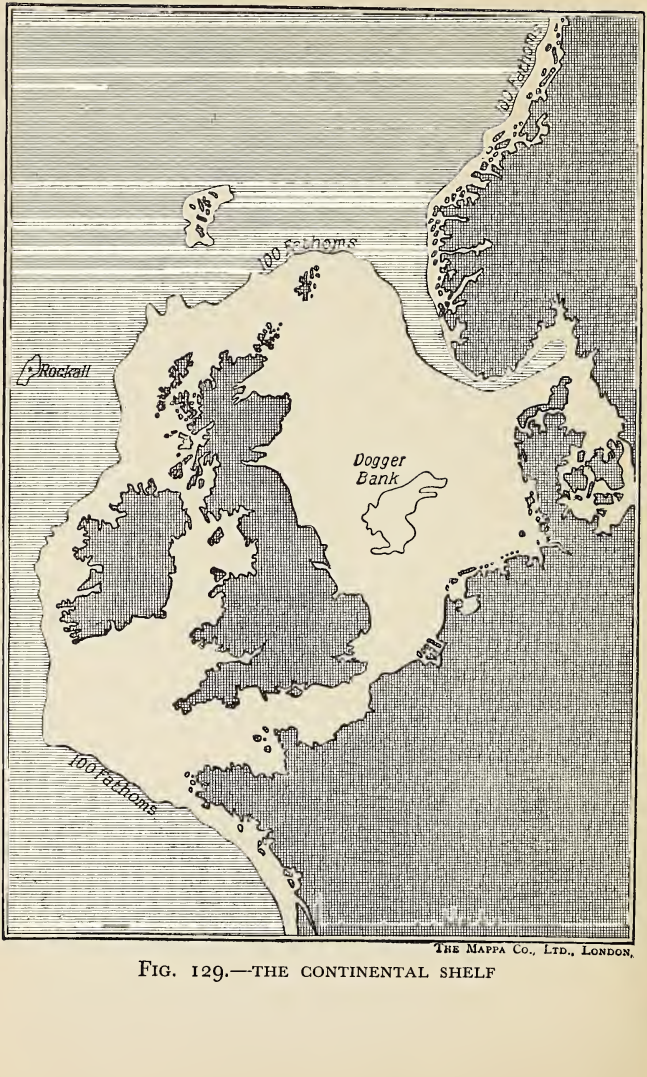
THE BRITISH ISLES

Geologists, who study the rocks, tell us that the real edge of the Continent is not the present coast but the line in the sea joining points which are 600 feet deep. The geologists say that until " recently " (meaning perhaps 100,000 years ago !) this 100-fathom line or *Continental Edge*, as it is called, was the actual coast of the Continent. When that was so, Britain was part of the Continent, as shown in fig. 129. The sinking of the land which separated our country from the Continent has had other important effects, *e.g.* :

(1) It caused the sea to flow into the lower parts of the river valleys, thus forming the estuaries, such as those of the Thames, the Humber and Clyde, which allow great ships to sail into the interior of the country.

(2) The shallow seas on the Continental Shelf are good breeding-grounds for shoals of fish. Our fishing industry is important, not only because it is a means of livelihood for great numbers of people and provides a considerable part of our food supply, but also because it has been the school in which were trained the seamen who laid the foundation of our Empire.

As Britain was only " recently " separated from the Continent it is not surprising to find that the chief structural divisions of our islands are just a continuation of those on the neighbouring parts of the Continent. The highlands of Scotland, for example, are really a continuation of the Scandinavian highlands ; Cornwall, as we have seen, is very similar in structure to Brittany ; the lands around the



THE MAPPA CO., LTD., LONDON.

FIG. 129.—THE CONTINENTAL SHELF

Wash are the counterpart of the lowlands of Holland—indeed one part of Lincolnshire is called Holland ; and in south-eastern England the chalk rock which forms the Chiltern Hills, the North Downs and the South Downs is found across the Channel in the hills of Picardy and the escarpments of Champagne.

Climatically also Britain reminds us of many things we have learnt while studying Euro-Asia. If we recall what we learnt about the winter dress of the people of northern China, we shall realise what is meant, for example, by the statement that " Britain is on the mild, moist, equable, western side of the continental mass."

We have learnt, too, that as we go farther east in Europe the winters get colder and the summers warmer. Even in our narrow islands we may observe the same facts. Western Ireland, for example, is 8° F. warmer than eastern England in January ; Cape Wrath, in the extreme north of Scotland, is no colder than the Isle of Wight ; and the highest sea-level July temperature in Britain is in south-eastern England.

THE LIFE AND WORK OF OUR PEOPLE

We often say that a person " cannot see the wood for trees " when he is so busy studying details that he cannot see facts which should be clear to everyone. So it is in geography : we may know many details about a country, and yet miss the great outstanding facts. This is especially true in regard to the country in which we live ; and it is sometimes wise to ignore details and see where our country stands in comparison with other countries.

Consider, then, the following remarkable facts :

(1) England is the *most densely peopled country* in the world. Great Britain, which includes the thinly peopled parts of Wales, Scotland and northern Ireland, is the third most

densely peopled country in Europe, being surpassed by Holland and Belgium only.

(2) Britain is the chief *manufacturing* country in the world, and has the greatest proportion of town-dwellers. In England more than half the people live in towns of over 100,000 inhabitants, while in France, Belgium and Denmark less than a quarter of the people live in such towns.

(3) Britain is the chief *trading* country in the world. Our total foreign trade is more than twice that of either of our greatest European competitors, France and Germany.

(4) Britain is the chief *fishing* country in the world. The *value* of fish landed at our ports is greater than that of any other country, though the *weight* of fish landed is greater in both U.S.A. and Japan.

(5) The most remarkable facts about farming are that Britain has *the smallest proportion of her people engaged in farming* of all the countries in the world, yet *farming is our greatest industry*, occupying more people than any other single industry.

FARMING IN BRITAIN

The kind of farming that is carried on in a particular district depends on the land surface, the soil, the weather, the skill of the farmer, and the demand for particular products.

Cattle thrive best where the climate is mild and moist and on lowlands where there is good soil for growing grass and other cattle foods. Consequently, the chief cattle-rearing districts in Britain are the plains and peninsulas which are open to the mild and moist south-westerly winds, *e.g.* the Irish plain, the Lancashire and Cheshire plain, and the Midland plain of England and the westward facing peninsulas of Cornwall and Devon, Pembroke, Carnarvon and Wigtown (see fig. 130 (*a*)).

There are three types of specialisation among cattle-farmers, viz. : the rearing of young stock, the fattening of cattle for beef, and the production of milk. Some districts which specialise in the rearing of young stock are the plain of Hereford and the Craven district of Yorkshire. Both these districts are also noted for beef cattle, as are also the coastal plains of Lincolnshire, Cumberland and Sussex. Milk production is, however, by far the most important aspect of cattle-farming in Britain. The inhabitants of our towns and cities require such large quantities of fresh milk that most of the farms near them specialise in milk production. When the towns are very large the neighbouring farms are unable to produce all the milk required and supplies have to be brought in daily from farms one hundred or even two hundred miles away.

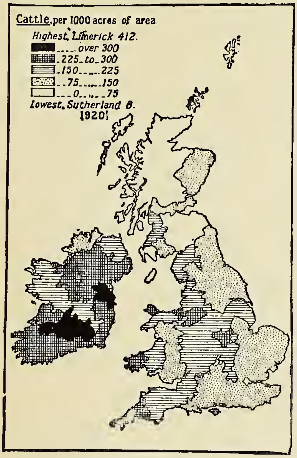


FIG. 130 (*a*).—THE DISTRIBUTION OF CATTLE IN THE BRITISH ISLES

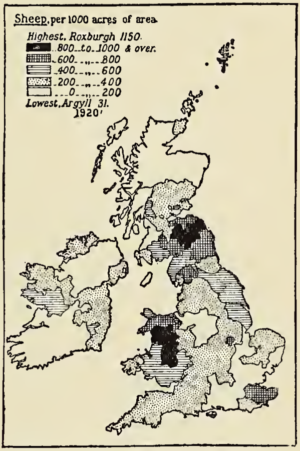


FIG. 130 (*b*).—THE DISTRIBUTION OF SHEEP IN THE BRITISH ISLES

Those districts which are far from great centres of population often specialise in the production of butter and cheese. Famous butter-producing areas are the plain of Somerset, the Vale of Aylesbury, and the Golden Vale of south-western Ireland. Noteworthy cheese-producing counties are Cheshire, Somerset (Cheddar) and Huntingdonshire (Stilton).

In recent years, too, many factories have been established in the dairying districts for manufacturing condensed and powdered milk.

Sheep like dry land and short grass, and will thrive even where the pastures are poor. Mountain slopes, which are quite useless for other types of farming, often make good sheep runs, and the mountainous districts of Wales, the Lake District, southern Scotland and the Pennines are among the best sheep lands in Britain. Where the underlying rock is chalk or limestone the soil is usually very thin and rainwater soaks quickly through the rock, leaving the surface very dry. For these reasons the limestone and chalk " escarpments " of south-eastern England are largely given up to sheep rearing (see fig. 130 (*b*)).

Arable Farming.—Where the farmer ploughs his land, he must not grow the same crop in the same field year after year. If he did, the harvests would soon become so poor as not to pay for his labour. Instead, he adopts a system of rotation of crops, the most usual sequence being wheat, roots, barley and clover. While the wheat and the barley are sold the roots and clover are used for feeding cattle and sheep, and so we find that the arable farmer often rears large numbers of animals as well.

Wheat will ripen only where the summers are warm and sunny. The greater part of the British Isles is too cool and cloudy to make wheat-growing profitable, and it is only in the south-eastern counties of England that large quantities of wheat are now grown. Even here, though the yield per acre is very high, farming costs are so heavy that wheat cannot be produced as cheaply as in Canada, Australia and Argentina. Consequently, many farmers, even in the "wheat counties," have turned much of their land into meadow and pasture. This means that the land is producing less food and employing fewer men, for "cereal land will produce twenty times more food and employ ten times more people than grass land." It is for this reason among others that governments try to devise schemes whereby the English farmer can be paid more for his wheat, without the cost of bread being unduly increased.

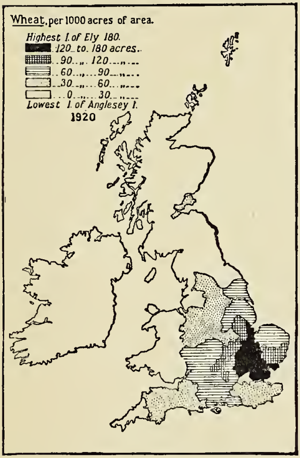


FIG. 131 (*a*).—THE WHEAT LANDS OF ENGLAND

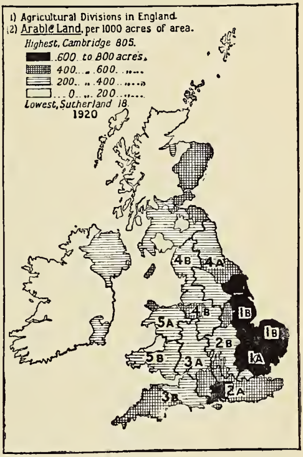


FIG. 131 (*b*).—THE DISTRIBUTION OF ARABLE LAND IN THE BRITISH ISLES

In the western lowlands of Britain there is much less arable land than in the drier eastern districts. *Oats*, which thrive in a rather cool, damp climate, are the chief cereal in the western districts.

In some districts the farmers have found the soil and the climate to be specially suited to the growth of particular crops. In Kent, for example, large quantities of fruit and hops are grown ; parts of Norfolk specialise in the production of currants and gooseberries ; north-eastern Ireland grows most of the flax which is produced in Britain ; many parts of the Fen district are specially noted for potatoes ; and in recent years Government aid has encouraged the cultivation of sugar beet in midland and eastern counties.

MANUFACTURING IN BRITAIN

In spite of the difficult times we have experienced since the war, Britain is still the most highly industrialised country in the world. How is it that she has been able to gain and retain this position ? We are, of course, quite ready to admit that a great deal is due to the energy, ability, initiative and inventiveness of our people. But Nature, too, has had a great deal to do with it. She has endowed us with special advantages such as few other countries possess. The chief of these natural advantages are :

(1) Rich *coalfields*, which not only produce all the fuel we require for our factories, furnaces, railways, gasworks, electric power stations, etc., but also provide a considerable surplus for raw material. It is safe to say that if Britain had not possessed an abundance of good coal, she could never have taken the lead as an industrial country.

(2) *Iron ore* and other minerals, either on the coalfields or close to them. Practically every coalfield in Britain has deposits of iron ore, and though few of these are now worth working, it was the occurrence of coal and iron in close proximity which enabled us to gain the lead in the manufacture of iron and steel.

(3) A highly advantageous *position* for the development of both manufactures and commerce. Our freedom from

invasion enabled our manufacturers to build up great industries in the eighteenth and nineteenth centuries, while

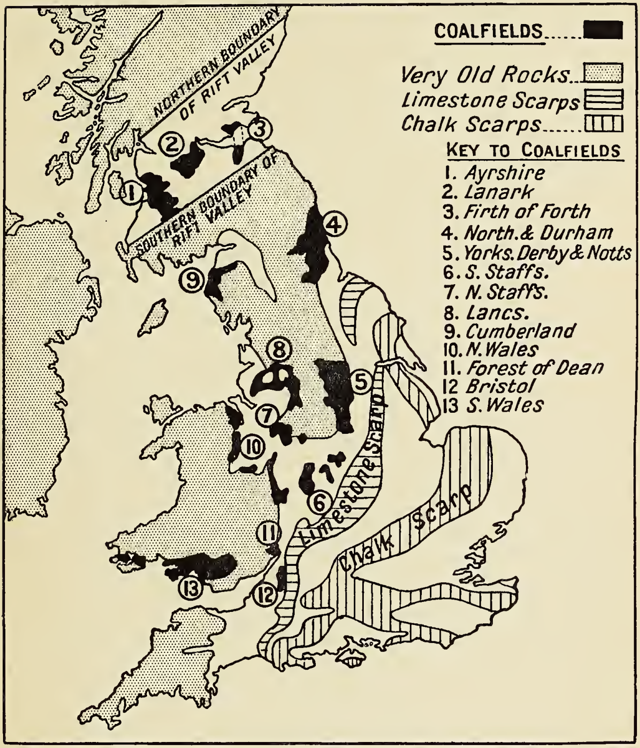


FIG. 132.—SIMPLIFIED GEOLOGICAL MAP

European countries were being ravaged by war ; and the situation of our islands between the Continent and the

Atlantic gives us great facilities for the importation of raw materials and the exportation of finished products.

Each of the great coalfields of Britain specialises in one or more industries.

(1) **The Lancashire Coalfield** is the greatest cotton manufacturing district in the world. *Manchester* is the great market and centre for the industry, and since the construction of the Manchester Ship Canal it has become one of the greatest ports of Britain. The spinning towns—*Rochdale*, *Oldham*, *Bury*, etc.—are situated on the inner edge of the coalfield about ten miles from Manchester, and the weaving towns—*Blackburn*, *Accrington*, *Burnley*, etc.—are situated on the outer edge of the coalfield, some twenty miles from Manchester.

(2) **The Yorks, Derby and Notts Coalfield** has three great industrial areas, viz. :

(*a*) *The West Riding Woollen District.*—Here, as in Lancashire, the people live crowded together in ugly, smoky factory towns. The various towns specialise in the manufacture of particular types of cloth, but there is no sharp separation between weaving and spinning as in Lancashire. *Bradford*, on a tributary of the Aire, is the market and centre for the industry, and also specialises in the weaving of velvet, mohair and artificial silk.

Huddersfield and *Halifax*, each on a tributary of the Calder, specialise respectively in good-quality suitings and in heavy materials like blankets and carpets. *Leeds*, on the river Aire, though the largest town of the West Riding, is not specially important for the manufacture of woollen cloth, but is the world's chief centre for factory-made suits.

(*b*) South Yorkshire and the neighbouring parts of Derby and Nottinghamshire are engaged in the *iron and steel industries*. The industry grew up centuries ago on the basis of local iron ore and charcoal. Nowadays iron ore and pig iron are brought from Lincolnshire and the Cleveland district, or imported from Sweden. *Sheffield* is world-famed for its special steels, tools and cutlery. *Rotherham* is chiefly engaged in the iron industry.

(*c*) The extreme southern end of the coalfield has miscellaneous industries. *Nottingham* specialises in the manufacture of lace and hosiery, and has also many engineering shops. *Derby*, though not on the coalfield, belongs to the same industrial area. It is specially noted for the manufacture of railway engines and rolling stock.

(3) **The Northumberland and Durham Coalfield.**—A good deal of the coal mined in this region is exported from Newcastle, Sunderland and other ports. Much of the rest is used in the smelting of the iron ore obtained from the *Cleveland Hills* of north Yorkshire. At the mouth of each of the three great rivers—Tyne, Wear and Tees—are towns engaged in shipbuilding, the most noteworthy being *Newcastle*, *Sunderland* and *West Hartlepool*. *Middlesbrough*, in north Yorkshire, is the chief smelting town, *Stockton* is engaged in shipbuilding and chemical manufacture, and *Darlington* specialises in the manufacture of bridges and railway equipment.

(4) **The North Staffordshire Coalfield** specialises in the manufacture of pottery, the district being known, in fact, as the Potteries. The local clay is used for coarse earthenware, but the finer materials have to be imported or brought from other parts of the country. The chief of these is china clay, which is brought by sea and canal from Cornwall.

Stoke-on-Trent is the great centre of the industry.

(5) **The South Staffordshire Coalfield** is engaged chiefly in the manufacture of metal goods. The industry grew up there because of the local supplies of iron ore. The smoke from the many furnaces earned this district the nickname " Black Country."

Birmingham, though not in Staffordshire and not on the coalfield, is the chief city of the region. It manufactures a great variety of products, including locomotives, motor-cars, cycles, firearms and innumerable small articles, such as pins, screws, springs, etc., which are valuable in proportion to their bulk and to the amount of raw material used. Other towns in the Black Country specialise in particular products, e.g. *Walsall* (brassware and leather goods), *West Bromwich* (hardware), and *Dudley* (chains).

(6) **The South Wales Coalfield** is specially noted for steam coal, large quantities of which are exported for use by ships and factories. The great industry of the coalfield is the manufacture of tin-plate, which is made by coating thin sheets of iron with a film of tin. Formerly the iron was mined and smelted on the northern edge of the coalfield, but most of it is now imported from northern Spain and northern Africa. The tin was formerly obtained from Cornwall, but most of it now comes from Malaya, Bolivia and Nigeria.

Swansea and *Cardiff* export steam coal and manufacture tin-plate. *Newport*, in Monmouthshire, has important iron and chemical manufactures, and also exports much coal.

(7) **The Scottish Coalfields** lie in a great trough or "rift valley" which was formed by the sinking of the land along great faults. The Central Plain, as this rift valley is called, is only a small part of the total area of Scotland, yet it contains nearly four-fifths of the people. It is the best farming district of Scotland, since it is the only large area of lowland, and the only large area in which the newer and softer rocks have been preserved. It is the chief manufacturing district because (*a*) the subsidence of the land which formed the rift valley formed great estuaries along which large ocean steamers can penetrate far into the land, bringing supplies of raw material and taking away manufactured goods, (*b*) it is the only part of Scotland where there are coalfields.

The Ayrshire Coalfield exports a good deal of coal to northern

Ireland, and also supplies fuel for many engineering shops and cotton factories in Kilmarnock and other towns.

The Lanark Coalfield is engaged chiefly in the iron and steel industries, which are carried on at Glasgow and many smaller towns in the Clyde valley. The estuary of the Clyde is one of the busiest shipbuilding districts in the world, important centres of the industry being Glasgow, Port Glasgow, Dumbarton and Greenock.

The Firth of Forth Coalfield lies partly on the northern side of the estuary in Fifeshire, and partly on the southern side in Midlothian. Industries supported by the coal of this field are : the manufacture of linen and linoleum at Kirkcaldy and Dunfermline, jute at Dundee, woollen goods at Alloa, paper, flour and textiles at Edinburgh.

THE GREAT PORTS OF BRITAIN

The farmers of Britain are unable to produce all the food we need and our manufacturers must also look abroad for their supplies of raw material. These supplies of food and raw material are bought with the money we obtain by selling manufactured goods to countries overseas. If we liken our railways and the ocean trade routes to arteries and veins, a port is like the heart, for through it pass all the life-giving streams of trade.

London.—If we were to make a list of factors which have aided the development of various Continental ports and capitals we should find that London possesses nearly all of them. Like Paris and Rome it is situated at the lowest convenient crossing place of its river ; like Antwerp, Rotterdam and Hamburg it is at the head of ocean navigation of its estuary ; like Paris, Brussels and Berlin it is the centre of the road and railway systems of the country ; like its rival ports across the Narrow Seas it is on the busiest sea in the world, and has a rich and densely peopled hinterland ; and like all capitals it owes its importance in great measure to the prosperity of the whole nation.

In spite of all these advantages, however, London does not deal with as great a proportion of British trade as, for example, Hamburg does with German trade, or Antwerp with Belgian trade. Its exports are only about one-fifth, and its imports about one-third, of the total for the country. Food, drink and tobacco make up nearly half its imports ; nearly all our tea, and half of our coffee, cocoa, sugar, dairy-produce, meat and wine are imported via London. Among the raw materials which account for another quarter of London's imports the chief are wool, rubber, timber, hides and skins. The remaining quarter is represented by various manufactured and semi-manufactured goods, notably copper, lead, tin, leather, paper, motor-cars and machinery. The exports consist chiefly of manufactured goods, particularly woollen goods, cotton goods, metals, machinery, chemicals and electrical apparatus. Nearly one-third of the total exports are not really British goods, but commodities imported by London merchants and re-exported to foreign countries.

Liverpool is the chief port for the industrial districts of the North and the Midlands. Its docks are accessible by the largest ocean liners, and it has the great advantage of being more conveniently situated for trade with America than is London. It is primarily the port for the cotton industry of Lancashire, and in spite of the fact that large vessels can reach Manchester via the Ship Canal, Liverpool imports more than three-quarters of our raw cotton and exports more than half our cotton goods. About one-third of Liverpool's imports consist of foods such as meat, wheat, sugar, fruit and dairy produce, which are needed by the people of the manufacturing towns of the Midlands and the North.

Hull ranks as the third port of the kingdom. It serves the West Riding woollen district, the Sheffield steel area and a large part of the Midlands. Raw wool is one of its chief imports, but in this respect it is surpassed by London, which is by far the greatest wool port in the country. In the export of woollen goods, too, Hull is surpassed by Liverpool and London. Among the chief imports of Hull are dairy produce from the Continent and vegetable oils from the tropics. Its nearness to the Dogger Bank has made it an important fish market.

Manchester, since the opening of the Ship Canal, has attained the rank of fourth port in the kingdom. It has not been able to wrest from Liverpool the trade in cotton, but has large imports of foodstuffs and exports general merchandise, as well as some cotton goods and woollen goods.

Southampton, situated at the head of Southampton Water, has three great advantages as a port, viz. : (*a*) it has a double water-front on the estuaries of the Test and the Itchen ; (*b*) it has four high tides per day, since the main wave of the tide is split by the Isle of Wight, and the branch which flows up the Solent reaches Southampton some hours earlier than the one flowing up Spithead ; (*c*) it can tap the Channel traffic before it reaches London, thus saving vessels many hours' steaming time.

Its great disadvantage is that it is a long way from the chief industrial districts. Consequently, it is more important as a passenger port than as a commercial port. It is indeed the chief passenger port of the British Isles. In addition it has much traffic in mails and perishable goods, and in late years its excellent railway connections have given it an increasing share in the trade of the industrial areas of the Midlands and the North.

Glasgow, situated at the head of the navigable estuary of the Clyde, is the chief port of Scotland, the second city of the United Kingdom, and the sixth port in respect of the value of goods handled. Its imports consist mainly of foodstuffs for the densely populated Scottish lowlands and of raw materials for the industries of this region. Its position facilitates trade with America, and most of its wheat, meat and fruit and other foodstuffs are imported from that continent.

Belfast is the chief city and port of northern Ireland. It is also a great industrial centre, although it has no local supplies of coal and iron. These minerals are, however, easily imported—the former from Ayrshire and the latter from Furness, and so Belfast has been able to develop a great ship-building industry. It has also many linen mills, rope-works, distilleries and tobacco factories.

EXERCISES

1. On a map of England and Wales draw a line from the mouth of the Tees to Portland Bill. Make out a list of the ways in which the districts to the north and west of this line differ from those to the south and east.

Arrange your answer under the headings: relief, climate, minerals, farming, manufactures.

2. Ireland is sometimes called "The Emerald Isle," because the dominant colour of the landscape is green. Explain, as fully as you can, why this is so.

3. Make a collection of labels, advertisements, pictures, etc., to be arranged under the following headings: market gardening, fruit growing, the sugar-beet industry, the cultivation of flax, famous dairying regions of Britain.

[The class may be divided into "teams" for this exercise.]

4. Draw sketch-maps to show the positions of the following ports and the industrial districts served by them: Liverpool, Hull, Glasgow, Belfast.

5. Choose one main line of railway from London to Scotland. Draw a sketch-map to show how its course has been determined by the relief of the land, and write short notes on (*a*) specially fertile farming districts and (*b*) busy manufacturing regions which are served by it.

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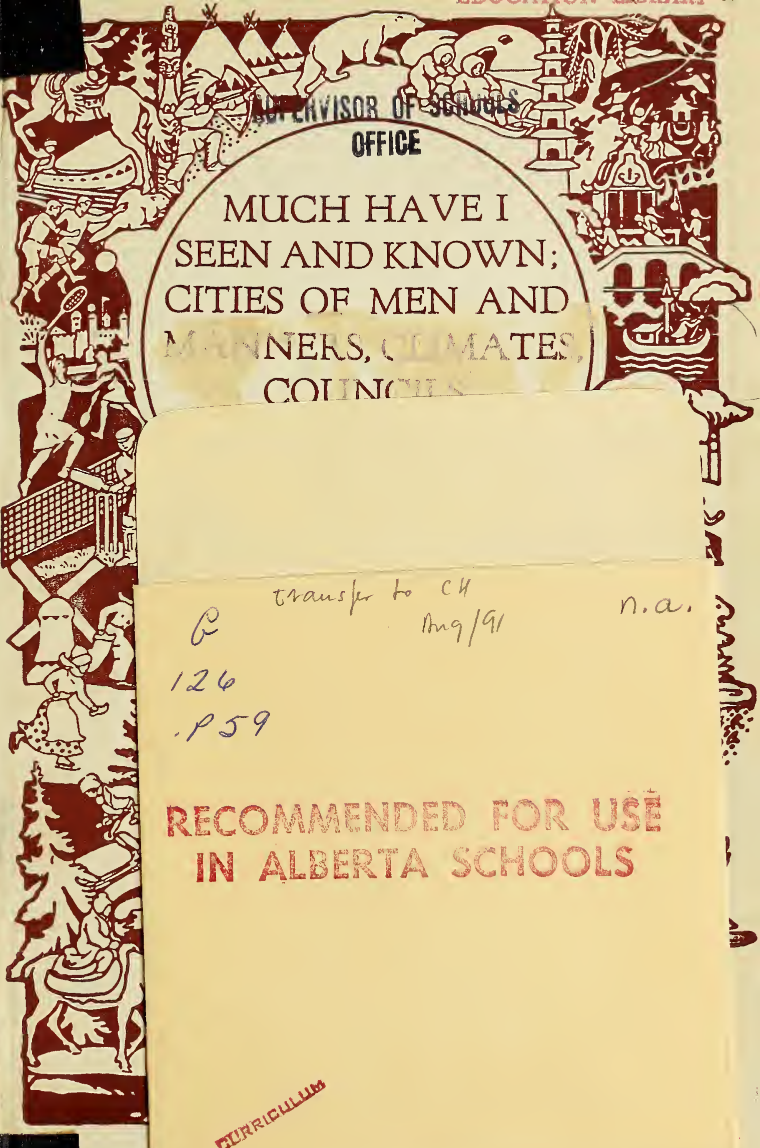

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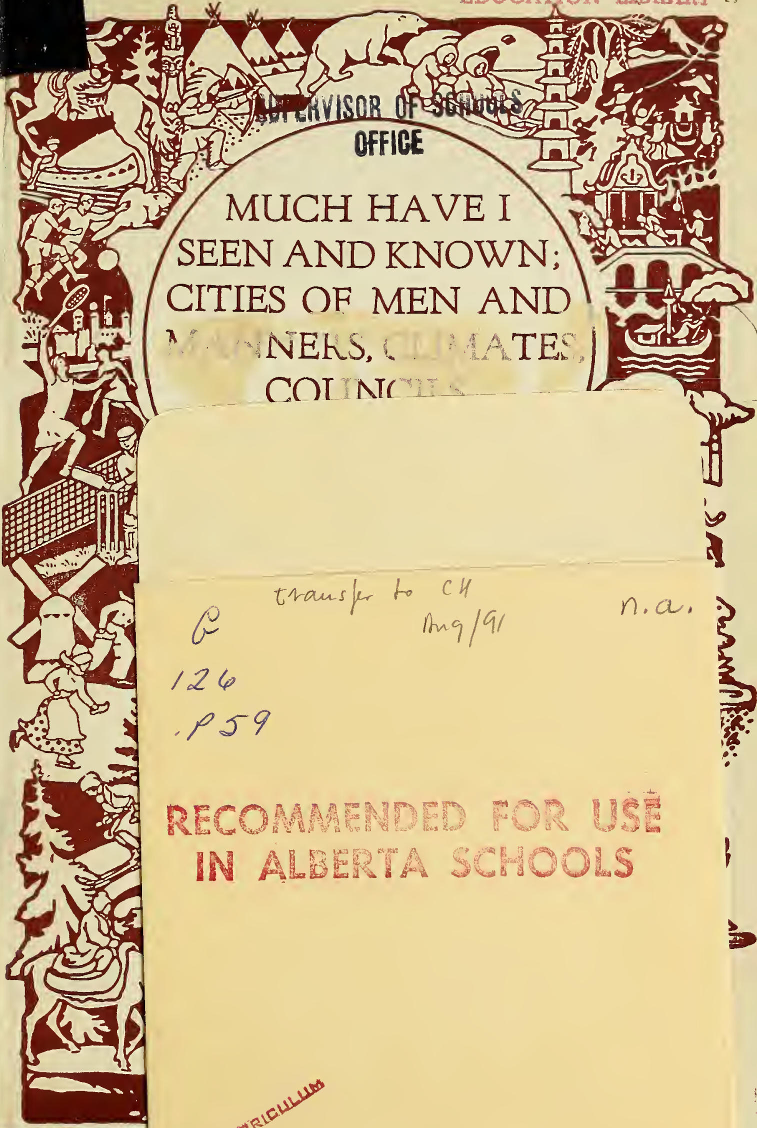

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